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The Soundness of Financial Intermediaries

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The Soundness of Financial Intermediaries

Like all corporations, financial intermediaries¹ are subject to a complex system of legal regulation. Much of the regulation of ordinary industrial corporations is directed at ensuring full disclosure of relevant information to investors. Stockholders and other investors may then choose whether to take certain risks. By contrast, the regulation of financial intermediaries also limits the risks associated with the investment itself. Some regulation is aimed at ensuring that the intermediaries are “sound,” *i.e.*, not in danger of failure because of illiquidity or insolvency. Other legal techniques are designed to cope with failure and other unsound conditions when they do occur. The purpose of this article is to examine the major legal strategies for regulating the riskiness of financial intermediaries. Part I introduces the agencies involved in the regulation of financial intermediaries. Part II discusses the reasons for having any governmental regulation of the risk levels at which financial intermediaries operate. Part III classifies the four principal strategies employed by the law to deal with the liquidity and solvency of financial intermediaries, and attempts to determine the general virtues and drawbacks that inhere in each of these strategies. No effort is made to assess all the particular rules and alternatives that are possible within a single strategy. This article

1. For an introductory discussion of the causes of financial intermediation and basic descriptions of the various types of intermediaries, see Clark, *The Federal Income Taxation of Financial Intermediaries*, 84 YALE L.J. 1603, 1605-08 & nn.1-21 (1975).

Because differences among the three major genera of financial intermediaries become important at various points in this article, the following outline may be helpful:

- I. Depository-Type Financial Intermediaries
 - A. Commercial Banks
 - 1. National Banks
 - 2. State Member Banks
 - 3. Insured Nonmember Banks
 - B. Thrift Institutions
 - 1. Mutual Savings Banks
 - 2. Savings and Loan Associations (S&Ls)
 - a. Federal S&Ls
 - b. State S&Ls
- II. Insurance-Type Financial Intermediaries
 - A. Life, Annuity, Health, and Accident Insurance Companies
 - B. Pension Plans
 - C. Property and Liability Insurance Companies
- III. Investment-Type Financial Intermediaries
 - A. Investment Companies
 - 1. Closed-End Funds
 - 2. Open-End Funds
 - B. Real Estate Investment Trusts

Like all financial intermediaries, investment-type intermediaries rely on pooling techniques. See Clark, *supra* at 1607-08 (discussion of pooling). This characteristic relates them to depository and insurance institutions and sets them apart from broker-dealer firms. The latter offer their customers accounts to which units of specified financial assets are identified. These firms are financial intermediaries in a broad sense, but are not considered in this article.

deliberately takes a highly general approach in the belief that useful insights can be facilitated by a comprehensive vantage point.

I. Prologue: Regulatory Agencies and Their Activities

Before proceeding to the proposed analysis, it may be helpful to identify the principal agencies that regulate financial intermediaries and to describe, in general terms, their regulatory activities. Although the focus of this discussion will be on how these activities ensure soundness, some mention will be made of their role in achieving other legislative goals.

The first group of financial intermediaries is made up of depository institutions—commercial banks and thrift institutions. Commercial banks, which comprise the largest class of financial intermediaries,² are subject to multiple regulation; all but a few are affected by at least two agencies. Nationally chartered banks are under the primary supervision of the Comptroller of the Currency, whose office is within the Treasury Department.³ The Comptroller receives periodic financial reports from national banks; he passes upon applications for charters, branches, and, if the product of a business combination is a national bank, mergers. The greatest number of employees under his direction are bank examiners, who periodically visit the premises of national banks. Examiners seek to evaluate the quality of a bank's assets and management, assess its overall financial condition, and test for compliance with particular rules and guidelines directed toward ensuring financial and managerial integrity. In addition, they check for compliance with equal employment opportunity legislation and with various laws and regulations aimed at consumer protection (*e.g.*, truth-in-lending, equal credit opportunity, and fair credit reporting rules). Other employees of the Comptroller's office are responsible for formal enforcement proceedings against wayward banks. The Comptroller also performs, as to national banks, many functions similar to those of the Securities and Exchange Commission (SEC), though the SEC does have jurisdiction over bank affiliates and bank holding companies.⁴

2. See J. WHITE, *BANKING LAW* 34-37 (1976) (structure of commercial banking).

3. The work of the Comptroller of the Currency is fully and readably described in *Responses by the Comptroller of the Currency to the FINE Study Questionnaire*, in I STAFF OF HOUSE COMM. ON BANKING, CURRENCY AND HOUSING, 94th Cong., 2d Sess., *FINANCIAL INSTITUTIONS AND THE NATION'S ECONOMY* 301-461 (Comm. Print 1976) [committee print hereinafter cited as *FINE STUDY PAPERS*].

4. 15 U.S.C. §§ 78l(i), 78p, 78w (1970 & Supp. IV 1974); 15 U.S.C.A. § 78m (West 1971, Supp. 1976 & June 1976 Pamphlet); 12 C.F.R. pts. 11, 16 (1976).

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All national banks are members of the Federal Reserve System⁵ and are subject, *inter alia*, to its reserve requirements.

Similar supervision, examination, and enforcement functions are performed by the Board of Governors of the Federal Reserve System (Board) with respect to state-chartered banks that are members of the System;⁶ by the Federal Deposit Insurance Corporation (FDIC) with respect to insured nonmember banks;⁷ and by the banking commissioners of the 50 states with respect to all state-chartered banks, whether or not they are members of the System or are FDIC-insured.⁸ Various arrangements among the agencies reduce some of the wasted effort caused by dual (state and federal) regulation.⁹

The Board must approve bank mergers when the resulting entity is a state member bank. It plays, as to those banks, a role under the federal securities laws similar to that of the SEC. The Board also makes all rules and dispenses regulatory approvals under the Bank Holding Company Act of 1956,¹⁰ regardless of the types of banks owned by holding companies. Of course, the Board and the 12 individual Federal Reserve Banks perform many functions other than those directed toward ensuring the soundness of depository institutions.¹¹

Much of the regulatory effort adumbrated above has or appears to have the effect of protecting depositors against bank failures and comes within the main focus of this article. These bank depositors may be termed "public suppliers of capital" because they comprise a class whose members are extremely numerous, have similar legal rights, and are, on the average, of relatively modest means.¹² The word "capital" is used despite the fact that some would reserve it for funds formally committed to the long-term use of an enterprise, because the

5. 12 U.S.C. § 222 (1970). This article ignores national banks located in U.S. territories.

6. For a full discussion of the Board's regulatory activities, see Board of Governors of the Federal Reserve System, *Responses to the FINE Study Questionnaire*, in I FINE STUDY PAPERS, *supra* note 3, at 463-666.

7. The FDIC collects and dispenses deposit insurance funds and plays a crucial role in liquidating failed banks. On the activities of the FDIC, see J. WHITE, *supra* note 2, at 80-82, 715-21, 726-31, 755-74 (1976).

8. See generally W. BROWN, *THE DUAL BANKING SYSTEM IN THE UNITED STATES* (1968); Wille, *State Banking: A Study in Dual Regulation*, 31 LAW & CONTEMP. PROB. 733 (1966).

9. See, e.g., J. WHITE, *supra* note 2, at 731 (discussing trial program in which FDIC has tried to decentralize bank examination procedure by relying on state examination reports of bank financial conditions).

10. 12 U.S.C. §§ 1841-1850, 1971-1978 (1970 & Supp. IV 1974).

11. Substantial portions of their resources are devoted to check clearing operations, creation and maintenance of the money supply, promulgation and enforcement of margin rules, and acting as the fiscal agent of the Treasury Department.

12. See Clark, *supra* note 1, at 1616-18.

aggregate deposit funds of a particular bank are often reasonably stable and thus function as a de facto part of its capital structure.

By contrast, a bank's stockholders are here denominated "elite suppliers of capital" because they are less numerous, typically wealthier, and supply a smaller portion of the funds used by banks. Bank stockholders are the intended beneficiaries of the securities regulation applicable to banks. Even though stockholders are not covered by deposit insurance, whatever reduction in the risk of bank failure is achieved by supervision and examination affects them.

The thrift institutions—mutual savings banks, savings and loan associations, and credit unions—are subject to regulatory rules and processes that are similar to those affecting commercial banks.¹³ There are even parallels in the organizational structure of the agencies. Savings and loan associations, for example, may be federally chartered or state-chartered; the latter are usually subject to dual regulation. There are three principal federal statutes that deal with savings and loan associations. One establishes a system of Federal Home Loan Banks¹⁴ that is analogous to the Federal Reserve System, though much more limited in the extent and scope of its operations. A second, the Home Owner's Loan Act of 1933,¹⁵ provides for the chartering of federal associations, thus creating a parallel to the much earlier National Bank Act.¹⁶ The third act, the National Housing Act,¹⁷ establishes the Federal Savings and Loan Insurance Corporation (FSLIC), which closely mimics the FDIC. There are, however, differences between the federal regulation of depository institutions and that of thrift institutions. Commercial banks are regulated by three distinct federal agencies, which sometimes interpret the same laws differently.¹⁸ The laws affecting thrift institutions are, by contrast, basically administered by one supreme organ, the Federal Home Loan Bank Board (FHLBB).¹⁹ Another critical difference is that the laws affecting savings and loan associations have as an additional goal the promotion of mortgage loans for the purchase of residences. This difference is reflected in dissimilar asset restraints, and in the differences between the Federal Home Loan

13. See ABA HANDBOOK OF SAVINGS AND LOAN LAW (1973); T. MARVELL, THE FEDERAL HOME LOAN BANK BOARD (1969). Both of these sources are out of date with respect to various technical matters, but they give a good overview.

14. Federal Home Loan Bank Act, 12 U.S.C. §§ 1421-1449 (1970 & Supp. IV 1974).

15. 12 U.S.C.A. §§ 1461-1470 (West 1969 & Supp. 1976).

16. Act of June 3, 1864, ch. 106, 13 Stat. 99 (codified in scattered sections of 12 U.S.C.).

17. National Housing Act, tit. IV, 12 U.S.C. §§ 1724-1730f (1970 & Supp. IV 1974).

18. See Hackley, *Our Baffling Banking System*, 52 VA. L. REV. (pts. 1-2), 565, 771 (1966); Robertson, *Federal Regulation of Banking: A Plea for Unification*, 31 LAW & CONTEMP. PROB. 673 (1966).

19. 12 U.S.C. §§ 1437, 1464(a), 1725(a) (1970).

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Banks and the Federal Reserve Banks in patterns of advances to member institutions.²⁰

The second group of financial intermediaries consists of life insurance companies, property and liability insurance companies, and pension plans. The former two are regulated almost exclusively by state law.²¹ In this way they are unlike depository institutions. Even so, the functions of the insurance commissioners of the various states bear striking resemblances to those of banking regulators.²² Most importantly, insurance regulators periodically conduct on-site, intensive examinations of the financial condition of insurance companies. They also receive financial reports from these companies and pass upon applications for charters, mergers, and holding company acquisitions. One significant disparity between insurance companies and banking institutions is that insurance companies are allowed by law to operate in more than one state, while banks usually are not. An insurance company wishing to do business in another state must meet the entry conditions imposed by the state's insurance commissioner. When those conditions take the form of statutory restraints on the investments of insurance companies, as in New York, they may have a far-reaching impact on the use of insurance company funds.²³

The public suppliers of capital to insurance companies are policyholders. Since the policyholders are also the companies' customers, regulation promoting soundness and regulation protecting consumers generally protect the same persons, though in different ways. More-

20. See pp. 37-38, 99-100 & note 125 *infra*.

21. See H. DENENBERG *et al.*, RISK AND INSURANCE 461-501 (1964); S. HUEBNER, K. BLACK & R. CLINE, PROPERTY AND LIABILITY INSURANCE 558-81 (1968); C. KULP & J. HALL, CASUALTY INSURANCE 958-1033 (1968); Kimball, *The Purpose of Insurance Regulation: A Preliminary Inquiry in the Theory of Insurance Law*, 45 MINN. L. REV. 471 (1961). Although state regulation controls the relationship between insurer and insured, the federal securities laws apply to the relationship between the insurer and the holder of its securities. SEC v. National Securities, Inc., 393 U.S. 453 (1969).

22. Insurance commissioners concern themselves, as do bank regulators, with goals other than the soundness of the regulated companies. They enforce compliance with rules prohibiting certain kinds of policy provisions and requiring others. Many engage in ratemaking partially to protect policyholders against excessive premiums. Insurance commissioners may license and police the activities of insurance brokers and agents, and they may administer schemes—such as assigned risk pools—calculated to make insurance available to certain classes of people. A significant amount of uniformity in law and regulatory practice has resulted from the efforts of the National Association of Insurance Commissioners (NAIC), but important variations persist. For general descriptions of commissioners' activities directed toward goals other than soundness, and of the role of the NAIC, see H. DENENBERG *et al.*, *supra* note 21, at 479-81, 487-91, 496-98; S. HUEBNER, K. BLACK & R. CLINE, *supra* note 21, at 564-65, 568-69; C. KULP & J. HALL, *supra* note 21, at 970-76, 986-99, 1023-26.

23. See, e.g., Note, *The Effect of New York Statutory Restrictions Upon Life Insurance Investments in Common Stock*, 27 ALB. L. REV. 97, 98 (1963).

over, many insurance companies are mutual in form, and thus lack elite suppliers of capital.

Private pension plans are similar to life insurance companies in important respects. From the consumer's viewpoint, a pension fund's provision for retirement is analogous to life insurance's provision for death. Liabilities are long-term and susceptible to fairly accurate actuarial estimation. But pension plans do differ in the way they are created, funded, administered, and "marketed" to public suppliers of capital.²⁴

Pension plans are classifiable as insurance-type intermediaries, yet they are basically subject to federal regulation rather than state or dual regulation. The dominant statute, the Employee Retirement Income Security Act of 1974 (ERISA), assigns regulatory authority to both the Department of Labor and the Internal Revenue Service.²⁵ The statute does not provide for a massive examination effort similar to that traditionally applied to depository-type and insurance-type intermediaries. Rather it stresses full reports and public disclosure,²⁶ a graduated assortment of remedies (including civil fines),²⁷ and ready access to the courts for plan participants (the public suppliers of capital) and beneficiaries.²⁸ Nevertheless, ERISA contains substantive rules aimed at plan soundness which parallel those applied to the institutions previously discussed—strenuous funding rules and fiduciary standards,²⁹ aimed at financial and managerial integrity respectively,

24. In its most common form, a pension plan is created by an employer company, by a union, or by a company and the union that represents the employees. The employer then makes contributions to the plan on behalf of the participating employees. Fund assets are usually managed by a bank trust department, though they may also be managed by an insurance company or an investment advisory firm. When a fund is managed by a bank or an insurance company, it may benefit indirectly from regulatory examinations of those institutions. In a sense, then, trustee plans and insured plans are regulated by banking and insurance commissioners. Employees do not shop around for pension plans, as they often do for banks; particular plans are attached to particular jobs or to membership in a particular union. See generally D. MCGILL, *FUNDAMENTALS OF PRIVATE PENSIONS* (3d ed. 1975).

On the federal regulation of pension plans, see H.R. Rep. No. 93-533, 93d Cong., 1st Sess., reprinted in [1974] U.S. CODE CONG. & AD. NEWS 4639; H.R. CONF. REP. NO. 93-1280, 93d Cong., 2d Sess., reprinted in [1974] U.S. CODE CONG. & AD. NEWS 5038; Comment, *Employee Retirement Income Security Act of 1974: Policies and Problems*, 26 SYRACUSE L. REV. 539 (1975).

25. Pub. L. No. 93-406, [1974] U.S. CODE CONG. & AD. NEWS 935 (codified principally at 29 U.S.C. §§ 1001-1381 (Supp. IV 1974) (Department of Labor) and in scattered sections of 26 U.S.C. (Internal Revenue Service)).

26. See ERISA §§ 210-211, 29 U.S.C. §§ 1021-1031 (Supp. IV 1974).

27. See *id.* §§ 501, 502, 29 U.S.C. §§ 1131, 1132 (Supp. IV 1974) (remedies).

28. See *id.* § 502(a), 29 U.S.C. § 1132(a) (Supp. IV 1974) (persons empowered to bring civil suit).

29. See *id.* §§ 301-306, 29 U.S.C. §§ 1081-1086 (Supp. IV 1974) (funding rules); *id.* §§ 401-414, 29 U.S.C. §§ 1011-1114 (Supp. IV 1974) (fiduciary standards).

and a guaranty fund for dealing with plan terminations.³⁰

The third group of financial intermediaries includes both investment companies and real estate investment trusts (REITs). Investment companies, though chartered under state law, are usually regulated by the SEC under the Investment Company Act of 1940.³¹ That Act emphasizes reporting and disclosure, stringent conflict of interest rules, regulation of advisory fees and sales loads, prevention of fraudulent or unfair sales practices, adherence to announced investment policies, and simple and sound capital structures.³² (Capital structure regulation is so severe that it virtually eliminates worries about investment company soundness in the formal sense of freedom from danger of insolvency: because of the limitations on debt an open-end investment company³³ could hardly ever “fail” in a discrete sense. It could, however, shrink catastrophically in value, causing great loss to its public shareholders.) There is no regular examination effort or guaranty fund, and asset restraints are minimal. As in the case of REITs,³⁴ regulatory protection against the consequences of unsoundness is far from complete. Yet at least the investment companies are intruded upon more than ordinary public corporations.³⁵

In summary, financial intermediaries are subject to disparate pat-

30. See *id.* §§ 4001-4004, 4021-4023, 29 U.S.C. §§ 1301-1304, 1321-1323 (Supp. IV 1974). Goals other than plan soundness are sought to be served, for significant provisions mandate meaningful disclosure of benefits and rights to plan participants, lay down participation rules to prevent discrimination against certain kinds of employees, and establish vesting standards analogous to the nonforfeiture laws applicable to insurance policies. See Comment, *supra* note 24, at 566-80, 661-63.

31. 15 U.S.C.A. §§ 80a-1 to 80a-52 (West 1971, Supp. 1976 & June 1976 Pamphlet) (includes exceptions to registration requirements for small companies).

32. An excellent introduction to the operation and regulation of investment companies appears in SEC REPORT ON THE PUBLIC POLICY IMPLICATIONS OF INVESTMENT COMPANY GROWTH, H.R. REP. NO. 2337, 89th Cong., 2d Sess. 33-77 (1966). This document does not, however, discuss the changes made by the Investment Company Amendments Act of 1970, Pub. L. No. 91-547, 84 Stat. 1413 (codified principally in 15 U.S.C. ch. 2D).

33. An open-end investment company, commonly known as a mutual fund, issues equity securities that may be redeemed at the option of the shareholders. 15 U.S.C. § 80a-5(a) (1970). Open-end investment companies are not permitted to issue senior securities, and borrowings from banks must meet a 300% asset-coverage test. *Id.* § 80a-18(f). This might be termed a restriction on “technical” debt because the investment company’s obligation to its shareholders has at least one characteristic that is reminiscent of some debt relationships: a shareholder may at any time force the company to redeem his shares at their current net asset value. *Id.* §§ 80a-2(a)(32), 80a-5(a)(1). Ordinarily, it takes a corporate decision, or a majority vote of shareholders, to effect a redemption.

34. See generally Aldrich, *Real Estate Investment Trusts: An Overview*, 27 BUS. LAW. 1165 (1972); Carroll, *Tax Policy for the Real Estate Investment Trusts*, 28 TAX L. REV. 299 (1973); Polubinski, *The Effect of State Securities or Blue Sky Law Regulation Upon the Organizational Structure and Operations of Real Estate Investment Trusts*, 30 BUS. LAW. 179 (1974); Note, *Real Estate Investment Trust: State Tax, Tort, and Contract Liabilities of the Trust, Trustee, and Shareholder*, 71 MICH. L. REV. 808 (1973).

35. As Professor Loss observes, the Investment Company Act is a regulatory statute, not just a disclosure statute. 1 L. LOSS, SECURITIES REGULATION 144 (2d ed. 1961).

terms of regulation by a variety of governmental agencies. As Part III of this article will show, however, the substantive, risk-reducing regulations applied to each type of financial intermediary find many parallels in the regulations applied to other types of intermediaries.

II. Reasons for Regulating the Riskiness of Financial Intermediaries

The forms of regulation that are aimed, actually or ostensibly, at the problem of the soundness of financial intermediaries comprise an impressive and variegated list.³⁶ Any general reflection upon the protective regulation imposed on financial intermediaries is bound to mire in a swamp of technical concepts unless one first thinks persistently about the reasons for such regulation. By "reasons" I do not mean causal or historical explanations, such as a tracing of the precise ways in which depressions³⁷ and scandals³⁸ have led to legislation; instead, I mean considerations that justify regulation.³⁹ Nor need the reasons examined consist of those considerations actually voiced by legislators and regulators in support of extant rules.

To evaluate various *prima facie* reasons for regulation, a heuristic procedure is to see if any one rationale can justify the full range and the general nature of existing regulatory shackles on risk taking. I consider first the hypothesis that protection is sought for some reason-

36. The list would include: special initial capitalization requirements; special restraints on entry; limitations on line of business and geographical expansion; regulation of product prices; subjection to special agency rules, examinations, and reporting requirements; restraints on the nature of assets in which the intermediary may invest and the valuation of such assets on financial statements; restraints on the nature, amounts, and valuation of liabilities issued by the intermediary; continuing capital requirements, liquidity reserves, special surplus funds; special conflict of interest rules; requirements or incentives to enter a special system for providing insurance to customers against the intermediary's financial failure; and special insolvency procedures (outside federal bankruptcy proceedings).

37. The Great Depression of the 1930s was, of course, the setting for the enactment of significant banking legislation, such as the statutes cited in notes 14, 15, 17 *supra*, the Banking Act of 1933, ch. 89, 48 Stat. 162 (codified in scattered sections of 12, 15, 39 U.S.C.), and the Banking Act of 1935, ch. 614, 49 Stat. 684 (codified in scattered sections of 11, 12, 15, 39, 40 U.S.C.), as well as the federal investment company legislation, cited in note 31 *supra*. Among the better early commentaries on the banking legislation are Kress, *The Banking Act of 1935*, 34 MICH. L. REV. 155 (1935); Westerfield, *The Banking Act of 1933*, 41 J. POLITICAL ECON. 721 (1933); and Willis, *The Banking Act of 1933 in Operation*, 35 COLUM. L. REV. 697 (1935).

38. Important insurance legislation in New York was the product of the Armstrong Investigation of 1905-1906. For a report of this legislative investigation, see 10 REPORT OF THE LEGISLATIVE INSURANCE INVESTIGATING COMMITTEE, N.Y. ASSEMBLY DOC. NO. 41 (1906). Accounts of that investigation appear in M. KELLER, *THE LIFE INSURANCE ENTERPRISE, 1885-1910*, at 245-92 (1963); and in 1 M. PUSEY, *CHARLES EVANS HUGHES 140-68* (1951).

39. I do not mean to imply that a study of how depressions and scandals have led to regulation would not reveal possible justifications for regulation. The point is that explanation and justification are distinct.

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ably definable class of persons. I then explore the more elusive notion that the restrictions perform some vitally important economic function beyond protection of a particular class of persons.

A. *Protection for a Class of Persons*

1. *Identification of the Class*

Typically, though not inevitably, the financial failure of a corporation exacts its heaviest toll from the investors who supply capital to the enterprise—its debtholders and stockholders. The corporation's customers and suppliers of raw material may suffer from the dislocation of an established business relationship or from a loss on credit extended to the business, but ordinarily the burden of insolvency will fall most heavily on the shoulders of the investors. Were it not for the more intense regulation of financial intermediaries, their suppliers of capital would bear the heaviest losses in an insolvency. This fact prompts an inquiry into the ways in which the suppliers of capital to a financial intermediary are different from the investors in ordinary industrial corporations.

Individual investors in the bonds and stocks of ordinary industrial corporations are predominantly from an elite group of persons who inhabit the higher brackets of income or wealth.⁴⁰ By contrast, the bulk of capital supplied to financial intermediaries comes from persons, usually debtholders or quasi-debtholders,⁴¹ who are extremely numerous and, on the average, of modest means. The class of capital suppliers to financial intermediaries is truly public: it includes nearly every adult, rich or poor. One way to explain the far greater regulation of the riskiness of financial intermediaries as compared to ordinary corporations, then, is to note that the increased regulation is intended to protect truly public suppliers of capital, as opposed to what might be called elite suppliers of capital.⁴²

40. See Blume, Crockett & Friend, *Stockownership in the United States: Characteristics and Trends*, 54 SURVEY OF CURRENT BUS., Nov. 1974, at 16.

41. Board of Governors of the Federal Reserve System, Flow of Funds Accounts 1965-1973 (1974 Supplement), at 29, 33 (Sept. 1974). (At the end of 1973, households had \$458 million in commercial banks. Equity capital of commercial banks was \$41 million.) Bank depositors and insurance policyholders are creditors. Shareholders in open-end investment companies might be looked upon as quasi-debtholders. See note 33 *supra*.

42. Indeed, some aspects of the law even suggest limiting protection to the less elite members of a "public" class. For instance, FDIC insurance now protects depositors against loss to the extent of \$40,000. 12 U.S.C. §§ 1813(m), 1817(i), 1821(a), 1821(i) (Supp. IV 1974). The same limit applies to accounts insured by the FSLIC and to accounts insured under the Federal Credit Union Act. 12 U.S.C. §§ 1724(b), 1728(a), 1787(c) (Supp. IV 1974). In this article, however, "public suppliers of capital" refers to a class that will include some extremely wealthy members.

To note this much is not very satisfying. Construed in terms of differences in the average socioeconomic characteristics of the classes of capital suppliers, the heavy regulation of financial intermediaries may constitute no more than a brute political fact,⁴³ or the regulation might be justified by reference to unique characteristics of public suppliers of capital. One's attitude toward this heavy regulation should be greatly influenced by the reasons, if any, that public suppliers of capital are thought to need special protection beyond the full-disclosure morality that federal law imposes for the benefit of elite suppliers of capital.⁴⁴

2. *Reasons for Protection*

One can identify five plausible reasons for special protection of a financial intermediary's public suppliers of capital. First, it can be argued that it is easier for insiders to steal from financial intermediaries than from ordinary corporations.⁴⁵ It is difficult to assess the general truth of this statement. Nevertheless, it is perhaps indicative that an extraordinary percentage of the failures of financial intermediaries has been ascribed to fraud, self-dealing, and other forms of unsavory behavior on the part of managements.⁴⁶ General studies of business

43. One could argue that successful political power exercised through lawful channels is a sufficiently fundamental justification of law, but I would not grant Thrasymachos even this much.

44. The principal securities laws do not impose the kinds of substantive restraints on industrial corporations that are placed on financial intermediaries. *See* Securities Act of 1933, 15 U.S.C.A. §§ 77a-77aa (West 1971, Supp. 1976 & June 1976 Pamphlet); Securities Exchange Act of 1934, 15 U.S.C.A. §§ 78a-78hh (West 1971, Supp. 1976 & June 1976 Pamphlet). A species of what I call reactive regulation, *see* pp. 86-90 *infra*, is provided for the benefit of securities investors by the Securities Investor Protection Act of 1970, 15 U.S.C. §§ 78o, 78aaa-78lll (1970 & Supp. IV 1974), but this applies to investors in their role as customers of broker-dealer firms, which are financial intermediaries. *See* note 254 *infra*.

45. This perception may have been behind the imposition of a higher standard of care on the directors of such institutions. *See* W. CARY, *CORPORATIONS* 525 (4th ed. 1969); pp. 77-78 *infra*.

46. According to an FDIC analysis of the 80 insured bank failures between January 1, 1960 and December 31, 1975, the basic causes of failures were as follows: in 42 cases (52.5%) improper loans to officers, directors, or owner, coupled in some cases with loans to out-of-territory borrowers or misuse of brokered funds; in 24 cases (30%) defalcation, embezzlement, or manipulation; in 14 cases (17.5%) managerial weaknesses in loan portfolio and general asset management. Letter to author from C.F. Muckenfuss III, Special Assistant to the Director, FDIC (Mar. 4, 1976) (on file with *Yale Law Journal*). Failed banks tend to be relatively small though recent events certainly show that this is not a universal rule. *Id.*

McKinsey & Company, Inc. analyzed the 230 insurance company insolvencies (101 life companies and 129 property-liability companies) that occurred between 1963 and 1972. Among life companies, the main cause of insolvencies was dishonest management (77% of the cases). The primary cause of property-liability insolvencies was underwriting losses (59% of cases)—as one might expect, given the risky nature of such insurance. But dishonest management and dishonest or bankrupt agents or reinsurers were substantial

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failures, though not completely comparable, indicate that only a negligible proportion of the business failures of ordinary industrial corporations is due to fraudulent and self-dealing conduct.⁴⁷ More pointedly (since ordinary corporations fail more frequently) the rate of failures due to such conduct is lower than that for financial intermediaries.⁴⁸ Fraudulent conduct prevents capital suppliers from knowing fully the risks actually posed by a firm, and thus may prevent markets from working perfectly. In principle, if not in a particular context,⁴⁹ insider misconduct could justify legal intervention on behalf of both public suppliers of capital to financial intermediaries and investors in ordinary corporations. The issue concerns the kinds of legal

factors, being the primary causes in 34% and 6% of the cases, respectively. McKinsey & Company, Inc., Final Report to National Association of Insurance Commissioners, Strengthening the Surveillance System 3-1 to 3-3 (Apr. 1974). Other studies of insurance company insolvencies are cited in Epton & Bixby, *Insurance Guaranty Funds: A Reassessment*, 25 DEPAUL L. REV. 227, 227 n.2 (1976).

By contrast, terminations of private pension plans do not seem to have been due in significant part to insider misconduct. See J. BROOKS, CONFLICTS OF INTEREST: CORPORATE PENSION FUND ASSET MANAGEMENT 5 (1975) (the comparatively few disastrous pension plan failures have rarely been result of fiduciary misconduct). Such concern as has been expressed has been directed principally to union-controlled funds, which are a small segment of all pension funds. See *Arroyo v. United States*, 359 U.S. 419, 426 (1959); 105 CONG. REC. 6523 (1959) (Sen. McClellan). In a sense, this negative evidence may reflect little more than the institutional context of private pension plans. The typical plan defines the benefits employees are to receive and calls upon the employer company (eventually) to fund them. Insider misconduct could theoretically flourish to an enormous extent—up to the point where the employer company itself was threatened with bankruptcy by the misconduct-induced increase in required contributions. More plausibly, insider misconduct on the part of plan trustees (normally, bank trust departments) is kept below such levels by the combined policing activities of employer companies and regulatory authorities. In any event, there was sufficient dissatisfaction with the failure of pre-ERISA law that known breaches of fiduciary responsibility were disclosed in congressional hearings. See *Private Welfare and Pension Plan Legislation: Hearings on H.R. 1045, H.R. 1046, & H.R. 16462 Before the General Subcomm. on Labor of the House Comm. on Education and Labor*, 91st Cong., 1st & 2d Sess. 470-72, 475 (1970) (sample of 22 selected pension fund scandals, and observations by Secretary of Labor).

47. See I REPORT OF THE COMMISSION ON THE BANKRUPTCY LAWS OF UNITED STATES, H.R. Doc. No. 93-137, 93d Cong., 1st Sess. 53-54 (1973).

48. Using Dun & Bradstreet's list of the number of failures per 10,000 listed industrial concerns over the period 1960-1975, one can compute an overall annual failure rate of 47.6 per 10,000 firms. Dun & Bradstreet, Inc., *The Business Failure Record* 1975, at 2 (Sept. 1976). If data from the last three years of the period are representative, an average of 0.9% of the failures were due to fraud (the only category of insider misconduct listed); the average annual rate of failure due to fraud over the 16-year period is therefore 0.4 per 10,000 firms. *Id.* at 12; Dun & Bradstreet, Inc., *The Business Failure Record* 1974, at 12 (Oct. 1975); Dun & Bradstreet, Inc., *The Business Failure Record* 1973, at 12 (Aug. 1974). Based on the data in note 46 *supra*, and on an assumption that there was an average of about 14,000 insured banks during the period, see note 246 *infra*, the average annual rate of bank failure due to insider misconduct was about 3 per 10,000 banks—more than seven times as great. (The total failure rate of banks was only 4 per 10,000. Perhaps soundness regulation works.) Obviously, there are serious problems as to the reliability and comparability of the data. See note 217 *infra*.

49. In some contexts, effective legal intervention may be more costly than the social waste caused by fraud.

tools that are appropriate in each case, taking into account the greater incidence of misconduct affecting intermediaries.

While many aspects of the regulation of financial intermediaries might be justified as appropriate responses to the misconduct problem,⁵⁰ it is nonetheless impossible to explain all or even most of such regulation on this basis.⁵¹ The inescapable fact is that much regulation is directed toward putting a ceiling on the risk level and regulating the types of risks that an honest management can deliberately take.

A second reason that might be proffered for regulation is that the risk level of a financial intermediary, absent deposit insurance or a similar regulatory backstop, is peculiarly subject to being changed abruptly and without timely notice to the capital suppliers. An ordinary industrial corporation's assets consist largely of tangible property such as plant and equipment or of intangible but illiquid assets such as franchises, patents, and licenses. The assets are sufficiently illiquid in secondary markets,⁵² and their values sufficiently tied to their position in the business as a going concern, that a wholesale transformation of the asset composition of the business is extremely difficult to effect quickly and without notice to the company's investors. Indeed, the prototypical wholesale transformation, a formal or de facto merger into another firm, often requires lengthy negotiation and, as a matter of state corporation law, notice to and the consent of the company's investors.⁵³ By contrast, a financial intermediary's assets consist of intangible claims, evidenced principally by pieces of paper or book-keeping and computer entries, which are often quite readily marketable. Absent special regulation, it would be easy for the management of an intermediary to sell off its intangible assets and replace them with new claims that in the aggregate constitute a portfolio with a radically different level of risk. The shift would occur in the "ordinary course of business," so to speak, without involving a merger or anything else invoking the usual right of investors to vote or to dissent

50. See pp. 77-79 *infra*.

51. The many techniques grouped under the headings of anticompetitive regulation and portfolio regulation, see notes 69, 83, 84, 86, 88, 89, 125-127 *infra*, are not directed at insider misconduct. And reactive regulation, see notes 246-248, 252, 260-264 *infra*, responds to problems regardless of their source.

52. Secondary markets for tangible goods are those in which second-hand goods are bought and sold. Secondary markets for financial assets are those in which the financial assets are bought and sold after having been bought from the original issuers. Common stock of public companies, for example, is usually issued via what is referred to as the "primary" distribution process. It is then traded for many years on the secondary market. Mutual fund shares, by contrast, are usually bought through a primary distribution network, and also sold (back to the fund) in that network.

53. E.g., DEL. CODE ANN. tit. 8, § 251 (Michie 1974 & Supp. 1975); N.Y. BUS. CORP. LAW § 903 (McKinney Supp. 1975-76); ABA-ALI MODEL BUS. CORP. ACT § 73 (1969).

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and pursue an appraisal remedy.⁵⁴ A particularly clear example of how the perception of this possibility influences regulation is the provision in the Investment Company Act restricting (perhaps fruitlessly) management's ability to change the investment objectives of an investment company.⁵⁵

There is a great deal of truth in the notion that financial intermediaries can shift their aggregate risk levels more readily than other corporations.⁵⁶ But this does not justify protective regulation of intermediaries. The "risk shiftability" argument assumes that, absent regulation, information about shifts and risks would be inadequately communicated to investors. Managements, for instance, might be fraudulent, careless, or simply unwilling to have their major decisions subjected to public scrutiny. Yet this affords a reason only for requiring management to disclose proposed changes in risk levels and to give public suppliers of capital an opportunity to opt out at a fair price.⁵⁷ Current regulation goes far beyond requiring disclosure and a fair exit opportunity, and this necessitates a further probe: Why is this strategy apparently believed to be inadequate to protect the financial intermediary's public suppliers of capital? Some insight into possible answers is gained by considering the third reason for special protection of public suppliers of capital.

The third possible reason for regulating the risk levels of financial intermediaries is that public suppliers of capital are systematically disadvantaged by significant imperfections in the market for their funds. One such imperfection may be that the costs of obtaining accurate, relevant, intelligible, and personally usable information about the risks of alternative investments in financial intermediaries is excessively high for many public suppliers of capital in relation to the amounts to be invested. For example, an elderly retired person about to invest \$200 in a savings account at an unregulated savings

54. See, e.g., DEL. CODE ANN. tit. 8, § 262 (Michie 1974); N.Y. BUS. CORP. LAW §§ 623, 910 (McKinney 1963 & Supp. 1975-76); ABA-ALI MODEL BUS. CORP. ACT §§ 80, 81 (1969).

55. 15 U.S.C.A. § 80a-13 (West 1971 & Supp. 1976).

56. It is possible that an ordinary industrial corporation could easily change its risk level by suddenly incurring an enormous amount of debt. This usually could be done without violating state corporation statutes. But for most public corporations it is reasonable to assume that the procedure would violate the terms of existing loan agreements with institutional lenders or otherwise would be difficult to execute unilaterally.

57. The response of ordinary business corporation law to mergers may be taken as a paradigm: The shareholder is informed of the impending event, in most cases is given a vote on it, and, if he is in a minority voting against the transaction, is remitted to appraisal rights. See, e.g., Eisenberg, *The Legal Roles of Shareholders and Management in Modern Corporate Decision Making*, 57 CALIF. L. REV. 1 (1969); Manning, *The Shareholder's Appraisal Remedy: An Essay for Frank Coker*, 72 YALE L.J. 223 (1962); Vorenberg, *Exclusiveness of the Dissenting Stockholder's Appraisal Right*, 77 HARV. L. REV. 1189 (1964).

and loan association might find that a substantial portion of the investment, as well as a significant amount of time and effort, would be consumed were he to seek and obtain information relevant to the risk presented by the account. An expenditure of money for financial statements might itself be purposeless, if he lacks the sophistication and training necessary to assess such information properly. Presumably he would have to find and pay an expert to decipher the information so that it could be integrated with information about his total investment portfolio and preferences. The total expenditures might well exceed the expected return from the \$200 investment. While the example is extreme, similar market imperfections undoubtedly affect many public suppliers of capital.⁵⁸

High information costs might not justify protective regulation if one could confidently expect that services, such as those supplied in *Consumer Reports* (in the case of tangible goods) or by Moody's and Standard & Poor's (in the case of securities), would spring up to obtain and process information about risk levels and translate it into recommendations specifically geared to particular types of public suppliers of capital. The market would thus produce efficient institutions for reducing information costs to an acceptably low level.⁵⁹ Alternatively, if such information intermediaries did not flourish in an unregulated world, one might argue that this fact simply demonstrated that even the efficient cost of getting usable information to the public suppliers of capital exceeded the benefits to be gained from it. Thus, regulation would be undesirable.

Both of these alternative viewpoints are flawed if, as seems quite possible, it is difficult to keep this information from those who do not pay for it. Information cast in terms usable to public suppliers of capital might be efficiently produced and delivered by one or more producers, might cause an overall benefit greatly in excess of the cost of production and delivery, and yet might not be privately supplied

58. This inefficiency in the financial markets dealt in by public suppliers of capital contrasts sharply with the extraordinary efficiency of the capital markets in which financial intermediaries deploy their funds. See B. MALKIEL, A RANDOM WALK DOWN WALL STREET 170-75 (1973); Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FINANCE 383 (1970).

59. The means of paying for information intermediation pose interesting problems. The financial intermediaries conceivably could produce and distribute information at their own expense or (as in the case of ratings of industrial bonds by Moody's and Standard & Poor's) pay for the production of relevant, digested information, thus spreading the cost over all capital suppliers and/or customers of the intermediaries. One obvious difficulty with this approach is that the intermediaries, or the risk evaluators paid by them, might produce a great deal of fraudulent information.

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because of the difficulty of preventing people from using it without paying for it.⁶⁰

Let us assume that the relevant information about the risk posed by financial intermediaries to public suppliers of capital creates this difficulty. Does that fact, by itself, justify the kind of regulation of financial intermediaries that we have? Apparently not. The special character of the information seems to call only for a system of publicly sponsored or financed information intermediaries. Regulation goes far beyond that, for it seeks to control risks, not merely to convey information about them.

One could respond to this last assertion by suggesting that existing regulations are justified because they are simply a cheaper way of getting the relevant information to the public suppliers of capital. Government, under this rationalization, has chosen to deal with information costs in a heavy-handed way—by changing the information. When the resulting information is radically simple, the costs of communicating it should be minimal. Thus, relatively small claims against banks, thrift institutions, insurance companies, and pension plans are made virtually riskless through regulation, and over time the public comes to know this fact. Even the most ignorant of public suppliers of capital, the one who would have to expend the greatest amount to be able to understand and use relevant information, knows that if he wants safety he can just put his money in the bank.

This response is simply not plausible if meant to imply that substantive risk-reducing regulation is the cheapest way to achieve the *bare* goal of reducing information costs. That goal could be achieved at a lower cost if the regulatory agencies used the reports they already receive and the examinations they currently conduct to provide information to public suppliers of capital.⁶¹ Making such use of existing

60. The problem arises because it is difficult to prevent customers from sharing the information with other individuals. Even if the organizations which sold information about financial intermediaries were given a property right in that information, the costs of enforcing that right might be prohibitive. For a discussion of goods for which there are high exclusion costs, see D. WINCH, *ANALYTICAL WELFARE ECONOMICS* 119-22 (1971).

61. The experience of Pennsylvania in supplying consumers with cost rankings of life insurance companies and their policies provides an example. See *The Life Insurance Industry: Hearings Before the Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary*, 93d Cong., 1st Sess., pt. 3, at 1515-59 (1973) (prepared statement and testimony of Herbert Denenberg, former Pennsylvania Insurance Commissioner). There seems to be little doubt that the Pennsylvania Insurance Department's Shopper's Guides, reproduced in *id.* at 1583, 1623, 1648, 1835, were understandable, though perhaps with some effort, by an average consumer. *Id.* at 1537. Although Mr. Denenberg claimed that the Insurance Department was being driven "into bankruptcy due to the tremendous demands for the guides," *id.* at 1537, and could adduce particular instances of confusing or high-cost policies that were withdrawn from the market because of the guides, *id.* at 1749-52, some industry commentary reported that the overall sales impact of the life insurance guide was minimal, *id.* at 1762.

data and evaluations would entail little additional cost. Yet current regulation imposes costs far beyond what is necessary for obtaining and processing information from intermediaries. For example, significant additional costs arise from restrictive rules concerning lines of business and the investment and financing options open to intermediaries.

Some might argue that many public suppliers of capital would not comprehend, or would deliberately ignore, even simple, consumer-oriented ratings of financial intermediaries supplied by a government-sponsored source. Accordingly, it might be urged that the only effective way of communicating information to public suppliers of capital is by changing the institutions to make them so safe that only the simplest signals ("absolutely safe" or "not absolutely safe") are needed.⁶²

But this subtly recasts the argument and appeals to a different reason for regulatory activity. That some public suppliers of capital literally could not comprehend government-sponsored ratings of financial intermediaries, so that no expenditure of resources would enable them to understand, seems to be more properly characterized as a reflection of human finitude, not of information costs. Even though all persons have finite abilities, it is hard to imagine that many people could not understand some feasible but simple rating systems. It seems more likely that some public suppliers of capital will deliberately ignore the ratings, apparently finding other uses of their time more productive. If we nevertheless feel a desire to protect them from the consequences of this choice, it would appear to reflect a belief that their preferences are wrong in some sense. If public suppliers of capital could not understand the ratings or if they would simply ignore the ratings, regulation is supported by appeals to personal imperfections rather than market imperfections. Perhaps, then, though market imperfections are a source of the need for regulation of some kind, the general form of our actual regulatory system can only be justified, if at all, by reference to perceived personal imperfections.

The fourth reason for governmental protection of public suppliers

62. One might compare the experience with truth-in-lending, which some commentators allege to be a failure. See Brandt & Day, *Information Disclosure and Consumer Behavior: An Empirical Evaluation of Truth-in-Lending*, 7 U. MICH. J.L. REF. 297 (1974) (higher hopes of truth-in-lending have not been fulfilled; despite rise in knowledge about interest rates among middle and upper-income groups, effect of disclosure on credit search behavior and purchase behavior has been minimal); Kripke, *Gesture and Reality in Consumer Credit Reform*, 44 N.Y.U. L. REV. 1 (1969) (credit buying patterns influenced more by credit availability than by cost information; truth-in-lending will not benefit low-income buyer).

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of capital against very risky financial intermediaries is, therefore, that people need to be protected against themselves.⁶³ Human finitude and normative error are the major sorts of personal imperfections: human beings have limited capacities to understand, to reason, and to predict, and they do not always know or choose the risks that under some moral theory they ought to prefer. That people have limited capacities is undeniable. But the proposition that a person's actual preferences for risk-taking should not be dispositive as a normative matter is not always accepted. Solely for purposes of reference, I will call this view the thesis of human fallibility. According to this thesis, human beings are by nature prone to something identified as sin, valuational error, nonadaptive behavior, false consciousness, or "objectively" wrong preferences. For present purposes it is feasible to abstract from the differences among the concepts and from the many theories of the sources of fallibilism. It should be noted, however, that fallibilism is not confined to a special political group or historical period.⁶⁴

63. If everyone needs protection against his personal imperfections, it might seem odd to believe that the protection of any individual could be furnished by anyone else. It may be, however, that people more frequently make objectively rational analyses and "proper" moral evaluations of the conduct of others than they do of their own conduct. Moreover, both individuals and groups may foresee their own imperfections and take action to prevent them from having an impact on their future behavior. See Calabresi & Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1113-14 (1972) (discussion of self paternalism and "true" paternalism). Ulysses' having himself tied to the mast when he sailed near the sirens is perhaps the classic example.

64. Religious literature, for example, has from early times specified fallibilism in terms of original sin or the triumph of desire over the will. Compare AUGUSTINE, ENCHIRIDION ch. XXVI with Romans 7:13.

Similar conceptions often have appeared in secular literature. In the 20th century much self-defeating behavior has been attributed to the cunning of the subconscious. See, e.g., S. FREUD, A GENERAL INTRODUCTION TO PSYCHOANALYSIS 23-24 (J. Riviers trans. 1935). More recently, irremediable normative confusion has been portrayed as the inevitable residuum of conflicting instincts which result from the simultaneous operation of individual and group selection processes in evolution. See E. WILSON, SOCIOBIOLOGY 129 (1975). Wilson's point seems to be that many social animals, including man, are *not* rationally self-interested in any simple or exclusive sense. See also S. FREUD, CIVILIZATION AND ITS DISCONTENTS (1930).

Other theorists suggest a fallibilism which stems from the vagaries of behavioral conditioning. Experimental and clinical psychology indicate that many actual preferences (*i.e.*, behavior patterns) come into existence or pass away for essentially random reasons, yet may have deleterious biological consequences. See E. HILGARD, R. ATKINSON & R. ATKINSON, INTRODUCTION TO PSYCHOLOGY 482-83 (1975); F. KELLER & W. SCHOENFELD, PRINCIPLES OF PSYCHOLOGY 308 (1950); B. SKINNER, SCIENCE AND HUMAN BEHAVIOR 84-87, 104, 396-98 (1953). Once it is accepted that behavior patterns can be manipulated and changed, that they may result from a fortuitous sequence of events operating on an organism that adapts according to generalized rules that are not always appropriate, and that they occasionally have severe biological consequences, psychologists are frequently led to view human beings in a clinical light. These notions militate against the idea that, unless third parties will be injured, an individual's expressed preferences are to be carefully respected or tolerated. Analogy is more apt to be drawn to alcoholic addiction,

Fallibilism does not necessarily imply the need for governmental intervention, or a belief in a political theory that could be characterized as "paternalistic." A person acutely conscious of human imperfections may oppose governmental protection of citizens from their own errors because he thinks that it is impossible to choose rulers who know what is right or wrong about other people's preferences. Even if a person thinks public servants could identify serious moral error, he might still reject a system giving them control over the shaping and satisfaction of other people's preferences because he fears that public officials would use this power for their own benefit. Moreover, since fallibilistic theories strike many persons as an insult to human dignity, inevitably there is pressure to disguise these theories when they do underpin regulation. One seeks the comforts of projection by attributing the limitations and imperfections that cause misfortune to abstract markets and not to people.⁶⁵

Protective legislation concerning financial intermediaries thus may be viewed as an example of fundamentally paternalistic legislation masquerading as a response to market imperfections. Moreover, the idea that protective regulation responds to a combination of market and personal imperfections seems to justify the general form of existing protective regulation better than the notion of market imperfections alone.

Nevertheless, paternalism cannot be a complete rationale, because regulation stops far short of attempting to compensate for all conceivable normative errors in risk taking. In general, because of the substantive, epistemological, and political reservations about paternalism, the law only protects people from themselves when the potential

which many now regard as a "medical" problem rather than as an expression of preferences that have as equal a claim to respect as another person's values.

Fallibilism also pervades some strands of political theory. Part of the writing on communism has been devoted to the proposition that the will of the people as expressed in majority voting (or, indeed, in marketplace transactions) is not to be accepted as normatively relevant by the revolutionary. An extreme but interestingly direct attack on the "metaphysics" of democracy was made by Trotsky. L. TROTSKY, *DICTATORSHIP VS. DEMOCRACY* 15-19, 31-41, 48-59 (1922). See also V. LENIN, *WHAT IS TO BE DONE?* (1929).

65. To some extent, market and personal imperfections are simply different sides of the same coin. Some market imperfections, such as natural monopolies resulting from economies of scale, seem to owe nothing to anyone's personal imperfections. By contrast, information costs as a type of market imperfection often present a problem both because there are significant costs of physical transmission and because the limits of human intelligence and memory require that resources be committed to processing, formulating, and storing information in a way that would be superfluous if people were more intelligent. Similarly, information costs and fraudulent proclivities may render certain market transactions prohibitively expensive, thus leading the transactions to be effected within the nonmarket organizational framework of a firm. See O. WILLIAMSON, *MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS* (1975).

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consequences to the individual are severe. Protection of smaller bank depositors is strong. There is less protection of investors in investment-type financial intermediaries, and, a fortiori, of elite suppliers of capital,⁶⁶ since the latter groups are likely to be somewhat wealthier and to have invested discretionary dollars.

That smaller investors receive more protection suggests a fifth possible reason for protective regulation: the present system prevents and spreads losses that fall on the smaller capital suppliers because those losses will generally have a greater disutility for such suppliers than similar losses will have for wealthier capital suppliers. On this interpretation, heavier risk regulation than that provided by the securities laws is warranted because it will produce a great avoidance of subjective disutilities at a cost that collectively is felt to be tolerable. The notion that regulation must correct the imperfections of markets or people is denied or ignored.

The problem with this reasoning is that it is hard to accept an undifferentiated desire to avoid suffering on the part of capital suppliers as a basis for governmental action. The urge to help the little fellow cries out for deeper justification. For example, a person may voluntarily make an investment knowing the chance of substantial gain is accompanied by the possibility of loss. If the loss occurs, society either accepts the proposition that the person had the right to take that type of risk, or it does not. If it does, it will naturally think that not compensating for such negative outcomes will maximize satisfaction of people's preferences (including those for risk taking of the sort in question). Society should also view it as inconsistent to say that one has a right to take certain risks and then, by protecting the risk taker from the adverse consequences of his risk taking, to make the risk into something that is not a risk at all. Obviously, the latter action would cast some doubt upon the seriousness with which the moral premise, the individual's right to take that type of risk, is held.

If society does not think that the individual has the right to take the risk in question, then it may protect him from that risk; but some reason for denying the right should be given. The reason might be that eliminating the particular risk option will have beneficial systemic consequences—for example, that it will prevent panic runs on banks—

66. The ceilings on deposit insurance protection, *see* note 42 *supra*, and their correlates in the case of the insurance-type intermediaries, *e.g.*, ERISA § 4022(a), (b)(3), (b)(6), 29 U.S.C. § 1322(a), (b)(3), (b)(6) (Supp. IV 1974); Epton & Bixby, *supra* note 46, at 240-42 (ceilings on guarantee fund coverage), are striking examples of the general point. (Granted, the ceilings can be avoided in various ways, such as by allocating one's deposits to a number of different banks.)

yet will leave the individual free to take other risks. Or the reason might be a paternalistic belief that an individual's preferences are erroneous when they lead to his taking any risks with his family's nondiscretionary income or to his not paying a little extra for absolutely safe insurance. There might be other reasons. The point is, however, that the absence of reasons for the government's overriding some individual preferences and not others—an inevitable byproduct of all governmental action—makes the formless desire to alleviate suffering an indeterminate guide to action. Governmental intervention will be essentially random, a function of the most visible stimuli of the moment, and will eventually generate a plethora of programs and policies that quite obviously cannot all be achieved.

Before proceeding to the second major kind of explanation for the regulation of risk levels of financial intermediaries, one should note both that some justifications of regulatory techniques in terms of their reducing risks presented to public suppliers of capital are disingenuous, and that some reasons for regulating financial intermediaries are not concerned at all with their riskiness. Under the former heading one can probably group some types of entry restrictions,⁶⁷ branching and geographic restrictions,⁶⁸ prohibitions on the payment of interest on demand deposits,⁶⁹ and ceilings on the payment of interest on savings accounts.⁷⁰ Regulations of this sort typically came into existence amid the belief that they helped reduce risk levels of financial intermediaries, and thus protected public suppliers of capital. Their continued existence, however, is often due not to their risk-reducing functions,⁷¹ but to their role as restraints on competition which increase the chance that the shareholders of financial intermediaries, the elite suppliers of capital, will obtain monopoly rents. In general, this form of class legislation—or more exactly, class-oriented failure to change outdated legislation—is a result of political power on the part of benefited classes, and is difficult to justify in any other manner.

Under the heading of regulation that is not risk-regarding one can place the bewildering tangle of regulatory aids and restraints designed to encourage money raised by financial intermediaries to flow into

67. See note 86 *infra*.

68. See notes 88, 89 *infra*.

69. *E.g.*, 12 U.S.C. § 371a (1970) (member banks); 12 C.F.R. § 329.2 (1976) (insured nonmember banks); CAL. FIN. CODE § 854 (West 1968) (California banks).

70. *E.g.*, Regulation Q, 12 C.F.R. § 217.3 (1976).

71. Disinterested commentators find the risk-reducing functions of these restrictions either insignificant or unnecessary. See, *e.g.*, Alhadeff, *A Reconsideration of Restrictions on Bank Entry*, 76 Q.J. ECON. 246 (1962); Klein, *Competitive Interest Payments on Bank Deposits and the Long-Run Demand for Money*, 64 AM. ECON. REV. 931 (1974).

legislatively favored sectors of the economy such as housing.⁷² To take an obvious example, consider the basic legislative plan of restricting federal savings and loan associations to investment in either low-yielding government securities or residential mortgages.⁷³ Regulations attempting to control an institution's allocation of funds, which comprise a class of what are often called selective credit policies,⁷⁴ are a topic for separate consideration. The only point of relevance is that they must be separated from any analysis of risk-regarding regulation.

B. *Special Economic Function*

An apparent alternative to the view that risk-regarding regulation of financial intermediaries derives from some combination of reasons for protecting public suppliers of capital is a justification resting on the alleged special economic function performed by financial intermediaries. Commercial banks, for example, could be said to occupy a peculiar and crucial role in the general economy, because they supply

72. The ways in which the government seeks to aid housing are indeed numerous. Many could be put into one or more of four categories: (1) programs that subsidize demand, such as the Sections 235 and 236 programs administered by the Department of Housing and Urban Development, 12 U.S.C. §§ 1715z, 1715z-1 (Supp. IV 1974) (§§ 235 and 236 were added to the Housing Act of 1949, Pub. L. No. 171, 63 Stat. 413, by the Housing and Urban Development Act of 1968, Pub. L. No. 90-448, §§ 101(a), 201(a), 82 Stat. 476), and, arguably, the rules that mortgage interest and real estate tax payments are deductible for federal income tax purposes, I.R.C. §§ 163(a), 164(a)(1); (2) programs designed directly to stimulate the supply of mortgage funds, such as those engaged in by the Federal National Mortgage Association ("Fannie Mae"), 12 U.S.C. § 1717 (1970 & Supp. IV 1974), the Government National Mortgage Association ("Ginnie Mae"), *id.*, and the Federal Home Loan Mortgage Corporation ("Freddie Mac"), *id.* § 1452 (1970); (3) arrangements for indirectly stimulating the supply of mortgage funds, such as the Federal Home Loan Bank System's readiness to make advances to its members, *see* T. MARVELL, *supra* note 13, at 56, the differential between interest ceilings on savings accounts at thrift institutions and those at commercial banks, *see* p. 37 *infra*, and, arguably, the tax law's generous rules as to the computation of the bad debt reserves of thrift institutions, *see* Clark, *supra* note 1, at 1633-35; and (4) programs which facilitate secondary market transactions in mortgages, such as FHA, 12 U.S.C. § 1720 (1970), and VA, 38 U.S.C.A. §§ 1810-1819 (West 1959, Supp. 1976 & Sept. 1976 Pamphlet), mortgage insurance.

For an interesting assessment of whether these programs actually have an impact which is not eventually offset by the operation of market forces, *see* Cook, *The Residential Mortgage Market in Recent Years*, 60 FED. RES. BANK OF RICHMOND ECON. REV., Sept./Oct. 1974, at 3 (programs are significantly effective).

73. 12 U.S.C.A. § 1464(c) (West Supp. 1976). The exceptions have become so numerous that it is now difficult to discern from the face of this statute what its basic plan is supposed to be.

74. *See, e.g.,* Kaminow & O'Brien, *Selective Credit Policies: Should Their Role Be Expanded?*, FED. RES. BANK OF PHILADELPHIA BUS. REV., Nov. 1975, at 3. Recent samplings of theory and opinion are to be found in *To Lower Interest Rates: Hearings on H.R. 212 Before the Subcomm. on Domestic Monetary Policy of the House Comm. on Banking, Currency and Housing*, 94th Cong., 1st Sess. (1975); *The Credit Allocation Act of 1975: Hearings on H.R. 3160 & H.R. 3161 Before the House Comm. on Banking, Currency and Housing*, 94th Cong., 1st Sess. (1975).

the means of payment.⁷⁵ On the basis of a financial domino theory, government would be called upon to prevent or insure against commercial bank failures, the effects of which would be multiplied in the economy.⁷⁶ As in the case of regulation to protect public suppliers of capital, most of the public would be protected by such legislation. There is thus significant overlap between the rationales, but there are differences in applicability and practical implications. For instance, even if commercial banks are thought to have a keystone role, it is difficult to make the same argument about other kinds of financial intermediaries.⁷⁷

Moreover, though the economic-function rationale may justify regulatory action, it alone does not clearly justify the precise form of current regulation. Deposit insurance, for example, may be necessary or desirable to prevent "panic" runs on banks, which can aggravate

75. See, e.g., C. HENNING, W. PIGOTT & R. SCOTT, *FINANCIAL MARKETS AND THE ECONOMY* 114-17 (1975).

76. See Scott & Mayer, *Risk and Regulation in Banking: Some Proposals for Federal Deposit Insurance Reform*, 23 *STAN. L. REV.* 857, 858 (1971). The theory is that a sharp reduction in the money stock, such as would be caused by large-scale uninsured bank failures, would depress the general level of economic activity. For example, Friedman and Schwartz contend that sharp reductions in the money stock resulting from widespread bank failures, together with the Federal Reserve System's failure to pursue corrective monetary policies, were primarily responsible for the Depression's severity. M. FRIEDMAN & A. SCHWARTZ, *A MONETARY HISTORY OF THE UNITED STATES, 1867-1960*, at 340-42, 351-59 (1963). Similar conclusions about the failure of monetary policy during the period are expressed in L. CHANDLER, *AMERICAN MONETARY POLICY, 1928-1941*, at 94-96, 110-11, 148, 349-55 (1971) by a researcher who had access to sources unavailable to Friedman and Schwartz. But other economists are not convinced. In a major, systematic, and rigorous study of forces underlying the Great Depression, Professor Peter Temin concludes:

This study has shown that the spending hypothesis fits the observed data better than the money hypothesis, that is, that it is more plausible to believe that the Depression was the result of a drop in autonomous expenditures, particularly consumption, than the result of autonomous bank failures. This is of great interest. But . . . the economist who uses this conclusion or any other conclusion about the Depression as a basis for economic policy recommendations essentially is performing an act of faith.

P. TEMIN, *DID MONETARY FORCES CAUSE THE GREAT DEPRESSION?* 178 (1976).

As to the obverse question about banks in the Depression—what caused an unusual increase in bank failures in the first place—see Temin's account of the rash of bank failures in cotton-growing areas. *Id.* at 85, 90-93.

77. The closeness of the liabilities issued by thrift institutions to money as traditionally conceived, and the potential importance of nonbank financial institutions in affecting spending, economic growth, and development are emphasized in J. GURLEY & E. SHAW, *MONEY IN A THEORY OF FINANCE* (1960). Evidence that money and so-called near-monies are not very good substitutes is provided in E. FEIGE, *THE DEMAND FOR LIQUID ASSETS: A TEMPORAL CROSS-SECTION ANALYSIS* (1964), whose conclusions are criticized in Lee, *Substitutability of Non-Bank Intermediary Liabilities for Money: The Empirical Evidence*, 21 *J. FINANCE* 441 (1966). Economists continue to disagree on the uniqueness and importance of "money" created by commercial banks. Whatever might be concluded about the similarities between commercial bank liabilities and thrift institution liabilities, it seems clear that it is significantly harder to extend the "keystone function" argument to the liabilities issued by insurance-type and investment-type financial intermediaries.

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bank failures and accelerate the contraction of the money supply. This latter argument focuses on the macroeconomic consequences of failures rather than on depositors. Yet one can surely conceive a workable deposit insurance scheme that, unlike the existing one, would be invoked only when serious adverse macroeconomic consequences would otherwise be expected to result. The President might be required by law to appear on the national news media whenever bank failures exceeded a prescribed rate and to declare that until further notice deposits in all failed banks would be promptly paid in full by the United States government.

More generally, regulation to protect financial intermediaries in their role as economic keystones would tend to focus on financial intermediaries as groups having aggregative economic significance, and thus need not be greatly concerned with preventing or cleaning up individual financial intermediary failures during periods of economic stability. Broad economic policies, such as management of the money supply, would be stressed.⁷⁸ The conceptual and institutional separation of monetary and fiscal policy from traditional "regulatory" techniques such as investment restraints, net worth requirements, and special treatment upon insolvency, indicates that much risk-regarding regulation cannot be adequately understood or justified as protection of key economic functions.⁷⁹ The need to protect key economic functions is a major, independent reason for regulation, not one that competes with reasons for protecting individual public suppliers of capital. In general, the reasons for protecting individual public suppliers of capital are more directly relevant to the strategies of regulation dealt with in this article than is an economic-function rationale.

The implications of this discussion of the purposes of regulation for the succeeding analysis are limited but important. Although a number of reasons appear to have contributed to the existence of the risk-regarding regulation of financial intermediaries, two reasons explain the fullest range of regulations. First, high information costs disadvantage public suppliers of capital in their dealings with unregulated intermediaries. Second, the public capital suppliers should be protected from the more serious consequences of their own propensity to

78. For a discussion of the relation between actions of the Federal Reserve Board and the money supply, see J. CULBERTSON, *MONEY & BANKING* 182-215 (1972).

79. Fiscal policy is, of course, determined by the President and Congress and not by the regulatory agencies. Regulation is performed by many agencies, including a part of the Federal Reserve Board. Within the Board's organization only some persons are engaged in controlling the money supply; banking supervision is handled by a different group. See BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, *THE FEDERAL RESERVE SYSTEM* 150-53 (4th ed. 1961).

normative error in the matter of risk taking. Even though one might contest the validity of governmental regulation for the latter purpose, a fundamentally paternalistic basis for regulation will probably continue to exist, disguised though it occasionally be. Therefore, the ensuing discussion will refrain from taking, as a universal premise for evaluation, the view that all risk-regarding strategies and techniques that are not designed to perfect the operation of market forces, or to compensate for their imperfections, should be abolished. Instead, it is assumed that at least the smaller capital suppliers somehow must be protected against personally serious losses caused by the failures of financial intermediaries, regardless of the degree of perfection of market forces. Within this constraint, however, it is quite appropriate to criticize regulation for excessive impairment of competition and to evaluate alternative or duplicative techniques of regulation on such a basis.

III. The Four Strategies of Risk Regulation

In the natural sciences, such as biology or chemistry, it has long been recognized that classification schemes are not incidental matters that can be taken for granted or left to unthinking descriptivists. Such schemes are absolute preconditions of successful theorizing and are only achieved with great difficulty. Earth, water, air, and fire will not do, even for a genius with reams of data. A table of elements, organized around some useful abstract principles, is necessary. Similarly, in order to study and debate risk regulation in a comprehensive yet coherent way, no precondition is more important than the existence of a logically organized taxonomy of techniques. The taxonomy tentatively offered below attempts to supply the needed framework.

The rules and regulations affecting the risk levels posed by financial intermediaries to public suppliers of capital may be grouped according to the four strategies they principally implement. For convenience I give the four strategies labels: anticompetitive regulation, portfolio regulation, insider misconduct regulation, and reactive regulation. The first three strategies attempt to prevent the realization of the risks of institutional failures; the fourth copes with realized risks. One of the preventive strategies, anticompetitive regulation, attempts to control the external financial environment in which financial intermediaries operate. The other two preventive strategies regulate risks internally. Of the internally oriented strategies, portfolio regulation is designed to ensure the *rationality* of the means employed to achieve the legally specified modicum of safety. This strategy is evident in the manifold

attempts to determine within limits what the portfolio of assets and liabilities of the intermediary will be. The other internally oriented strategy, insider misconduct regulation, is directed toward ensuring *allegiance* on the part of management and other employed personnel to contractual and legal goals—typically, those of providing a minimum level of safety for the public suppliers of capital and maximizing returns, within that constraint, to the elite suppliers of capital. Reactive regulation responds to actual liquidity crises and insolvencies. It comprises techniques such as emergency loans to troubled intermediaries or insurance payments to a failed intermediary's public suppliers of capital.

The question here posed and answered affirmatively is whether anything useful can be said that applies generally to all or many of the regulatory techniques that as a group comprise a given strategy. To be sure, there will always remain much to be learned about the characteristics and values of particular techniques, but the ability to make even speculative generalizations about the four broad strategies should prove helpful in attempting to harmonize what is now a cacophony of regulatory pronouncements.

An obvious approach to the analysis of the four strategies is to contemplate whether and how their costs and benefits can be expected to differ. In such an analysis one must seek the elusive golden mean. One must attempt no greater precision or certainty than the nature of the subject and present knowledge allow;⁸⁰ yet the inability to satisfy the methodological standards of the laboratory or the courtroom should not halt the quest for understanding. Perhaps the best technique for assessing costs is to divide them into several categories which intuitively seem to have discoverable interrelationships. When regulators use risk-restraining techniques, they face at least four types of problems which create their own peculiar costs: (1) primary formulation costs, the costs of originally formulating a specific type of regulatory restraint; (2) secondary formulation costs, those incurred in trying to enforce the underlying purpose of an existing restraint (including the costs of detecting avoidance tactics and formulating new regulations, litigating the broad language of an existing statute or regulation in order to fix its specific meanings and applications, and urging new law); (3) direct enforcement costs, the costs of achieving compliance with the literal terms of a restraint;⁸¹ and (4) indirect costs occasioned

80. ARISTOTLE, *NICOMACHEAN ETHICS* bk. I, ch. 3 (discussion of proper level of discourse for normative inquiries).

81. Obviously, under my definitions it will sometimes be necessary to decide whether the primary function of a given type of litigation is the practical specification of general

by implementing the restraint. The term "indirect costs" refers generally to three sorts of undesirable side effects of regulation: a regulatory restraint may serve an end ulterior to protection of the public from institutional failures, and the ulterior end may not be a sound goal of public policy; a restraint may lead to unfair discrimination among groups of persons; and a restraint may prevent business goals, such as the maximization of intermediary profits, from being efficiently achieved, leading in some cases to a misallocation of resources. As will be shown, it appears possible to make plausible generalizations about the different categories of costs typically generated by each strategy, and about the interrelationships among cost levels in the different categories.

In evaluating the anticipated benefits of a given regulatory strategy, three factors are involved: the type of protection, its likely order of magnitude (*i.e.*, the success of regulation at preventing failures or mitigating their consequences to public suppliers of capital), and its certainty of occurrence. The different "types" of protection include protection against competitive forces, against the management's deliberate taking of high risks, against managerial incompetence, dishonesty, or self-dealing, or against some combination of the preceding—each of which may raise the probability of a business failure of an intermediary and of loss to its public suppliers of capital.

A. *Anticompetitive Regulation*

The basic theory of the anticompetitive strategy, when unsullied by the claims of special interest groups or by special policy objectives, is that the legal system can reduce the number of failures of financial intermediaries by weakening the competitive forces operating on those institutions. Sheltered from competition, the intermediary may be able to earn some monopoly rents; if those rents are not stolen, squandered, taxed away, or paid out as dividends, they may serve to absorb later losses arising during unprofitable periods. If the strategy works, financial intermediaries should prove more resistant to the pestilential vapors of recession, managerial inefficiency, and technological backwardness.

For present purposes, the techniques for implementing the strategy

rules or the overcoming of recalcitrance about obeying reasonably clear rules, or to make some assessment of the relative importance of the two functions. This problem might be mitigated by defining "secondary formulation costs" as costs of enforcing regulatory restraints by detecting avoidance behavior and formulating new regulations or urging new statutes, and "direct enforcement costs" as costs of enforcing regulatory restraints by examinations, reporting requirements, prosecutions, administrative proceedings, informal "jawboning," and the like. I am not sure that this choice of definitions would make much difference; I avoid it because it deemphasizes the distinction between the purpose and the letter of legal rules.

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may be divided into price restraints and limitations on entry into markets. Price restraints restrict the economic return or the amount of financial services that financial intermediaries may provide to their public suppliers of capital. Among those restrictions are the prohibition against payment of interest on demand deposit accounts,⁸² the ceilings on the payment of interest on time deposits and savings accounts in depository financial institutions,⁸³ and the requirement of state insurance laws that premiums for fire and casualty policies—and, sometimes, life insurance policies—be “adequate.”⁸⁴ Some governmental interferences with the prices of transactions involving financial intermediaries, however, aim not at promoting the financial safety of the intermediaries, but instead seek to benefit other parties such as the intermediaries’ customers or retailers.⁸⁵

Among the second group of techniques, the limits on market entry, are the requirements that specific regulatory approval be given to new charters, to doing business in a new state, to new branches of depository financial institutions, to mergers, and to acquisitions by holding companies—all pursuant to a criterion that the event in question will serve the “public convenience and need.”⁸⁶ These requirements, here col-

82. See note 69 *supra*.

83. *E.g.*, Regulation Q, 12 C.F.R. § 217.3 (1976) (member banks of Federal Reserve System); *id.* § 329.3 (insured nonmember banks); *id.* pt. 526 (members of Federal Home Loan Bank System).

84. *E.g.*, ARIZ. REV. STAT. § 20-341 (West 1976); N.Y. INS. LAW § 186 (McKinney 1966); TEX. INS. CODE ANN. art. 5.01 (Vernon 1963).

85. Examples are provided by usury ceilings on loans made by intermediaries, *e.g.*, 12 U.S.C. §§ 85, 86 (1970 & Supp. IV 1974) (restrictions on maximum interest rate that national banks may charge); by the resale price maintenance scheme mandated for investment companies, Investment Company Act of 1940 § 22(d), 15 U.S.C. § 80a-22(d) (1970); and by requirements of state insurance laws that premiums not be “excessive” or “unfairly discriminatory,” *e.g.*, N.Y. INS. LAW § 186 (McKinney 1966) (superintendent may order adjustment of excessive or unfairly discriminatory rates; applies to life insurance and casualty insurance).

86. I assume the traditional view that the “convenience and need” criterion was in fact designed to prevent excessive competition (“overbanking” and its parallels in the case of nonbank intermediaries) and, consequently, to curb the number of failures. See Scott, *In Quest of Reason: The Licensing Decisions of the Federal Banking Agencies*, 42 U. CHI. L. REV. 235, 285-86 (1975). A revisionist interpretation of the criterion would be that the regulator is supposed to satisfy himself that low-cost financial services will be made available, or at least not be jeopardized, by the action in question. One might think that low-cost services to intermediary customers would eventually be jeopardized, for example, by the acquisition of a large local bank by a huge outside bank, if one thought that the outside bank would eventually “dominate” the local market and that the increased level of concentration would lead to higher prices to borrowers. Though very strong doubts can be raised about this line of reasoning, see note 116 *infra*, it conceivably rationalizes the presence of both the need criterion and procompetitive exhortations in some statutes defining regulatory standards for entry approval, see note 87 *infra*. More likely, such a twin standard simply reflects the legislators’ perception of the tension between the values of competition and the values of preventing intermediary failure: the responsibility is passed to the regulator, who is often left to strike a balance or decide whether anticompetitive effects are “outweighed” by the transaction’s contribution to convenience and need.

lectively referred to as the "need criterion," deserve special attention because they affect more types of financial intermediaries than other anticompetitive techniques.⁸⁷ Another subgroup of limits on market

87. Statutes and regulations imposing limits on market entry in terms of a "convenience and need" test, or something like it, are quite numerous in the corpus of law governing financial intermediaries. A sampling of major legal rules of this sort is provided below; the comments attempt to give some sense of the other—sometimes contradictory—aspects of the rules.

COMMERCIAL BANKS

A. *National Banks*: 12 U.S.C. § 26 (1970) (Comptroller investigates after receiving certificate from proposed national banking association); 12 C.F.R. § 4.2(b) (1976) (Comptroller considers adequacy of proposed capital structure, earnings prospects, convenience and needs of community to be served by proposed bank, character of management, and banking experience and ability of proposed officers and employees); 12 U.S.C. § 36(c) (1970) (if Comptroller approves and state law permits state banks to establish branches on same basis, national bank may establish branches); 12 C.F.R. § 4.5(c) (1976) (Comptroller has complete discretion as to approval of new branch); 12 U.S.C. § 1828(c)(2)(A), (c)(5) (1970) (Comptroller not to approve merger resulting in national bank unless anticompetitive effects found to be clearly outweighed in public interest by probable effect of transaction in meeting convenience and needs of community to be served); *id.* § 1842(c)(2) (same standard for approval by Board of Governors of bank holding company acquisitions of banks).

B. *State Member Banks*: *id.* § 322 (Board of Governors, after receiving application for membership, considers bank's financial condition, character of management, and whether corporate powers consistent with Federal Reserve Act); Regulation H, 12 C.F.R. § 208.5(a) (1976) (Board also considers convenience and needs of community, adequacy of capital structure, and earnings prospects); 12 U.S.C. § 321 (1970) (branching requirements same as for national banks, except that Board rather than Comptroller approves); Regulation H, 12 C.F.R. § 208.9 (1976) (branching); 12 U.S.C. § 1828(c)(2)(B), (c)(5) (1970) (Board may approve merger resulting in state member bank if anticompetitive effects outweighed by public convenience and need); *id.* § 1842(c)(2) (same test for holding company acquisitions).

C. *Other State Banks*: *id.* § 1816 (FDIC Board of Directors, after receiving application for deposit insurance, considers adequacy of capital, earnings prospects, character of management, convenience and needs of community, financial history and condition, and whether corporate powers are consistent with purposes of Federal Deposit Insurance Act); *id.* § 1828(d) (branching requires FDIC approval, standards coincide with those of § 1816); CAL. FIN. CODE §§ 362, 503 (West 1968) (California chartering and branching rules, test of public convenience and advantage); N.Y. BANKING LAW §§ 29, 105 (McKinney 1971 & Supp. 1975-76) (New York chartering and branching rules, test of public convenience and advantage); 12 U.S.C. § 1828(c)(2)(C), (c)(5) (1970) (FDIC may approve mergers resulting in insured nonmember banks if anticompetitive effects outweighed by public convenience and need); *id.* § 1842(c)(2) (Board of Governors applies similar test to holding company acquisitions of banks).

THRIFT INSTITUTIONS

A. *Mutual Savings Banks* (MSBs): MASS. ANN. LAWS ch. 168, § 78 (Michie/Law. Co-op 1970 & Supp. 1975) (board of bank incorporation employs public convenience and advantage test for proposed bank); *id.* § 5 (branching: *inter alia*, a public convenience and advantage test); *id.* § 72 (MSBs may merge if terms are approved by 2/3 of each board of trustees and by commissioner in writing; request for commissioner's approval shall be accompanied by \$1000 investigation fee); N.Y. BANKING LAW § 24 (McKinney 1971 & Supp. 1975-76) (superintendent, after receiving application of proposed savings bank, considers whether public convenience and advantage will be promoted, and whether character, responsibility, and fitness of persons applying are such as to command confidence of honesty and efficiency); *id.* § 240 (McKinney Supp. 1975-76) (branching rules parallel those for commercial banks); *id.* § 601 (McKinney 1971) (written plan of merger

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entry, the more mechanically formulated geographical restraints such as restricted lending areas⁸⁸ and both intrastate and interstate branch-

submitted to superintendent along with \$1000 investigation fee and certificate verifying that each board of directors has voted in favor of merger by at least two-thirds vote; plan "shall be in form satisfactory to the superintendent"); *id.* § 601-b (approval of superintendent is based on (i) the general policy statement of *id.* § 10, (ii) whether merger shall yield MSB larger than sound banking and effective competition dictate, (iii) whether merger may lessen competition so as to be injurious to public interest or tend toward monopoly, and (iv) public interest and needs and convenience thereof).

B. *Savings and Loan Associations*: 12 U.S.C. § 1464(e) (1970) (Federal Home Loan Bank Board (FHLBB), after receiving application for new federal S&L, considers character and responsibility of applicants, necessity of another S&L in community, probability of success, degree of injury to existing S&Ls); CAL. FIN. CODE § 5513 (West 1968) (application for new S&L: *inter alia*, public convenience and advantage test); 12 C.F.R. § 545.14(c) (1976) (standards for FHLBB approval of new branch of S&L include necessity for branch); CAL. FIN. CODE § 6002 (West 1968) (branching rule includes public convenience and advantage test); *id.* §§ 9202, 9204 (West Supp. 1976) (commissioner approves merger if he finds terms fair, just, and equitable and in conformity either to California corporation law with respect to domestic S&Ls or to federal laws and FHLBB rules and regulations with respect to federal S&Ls); 12 U.S.C. § 1464(d)(11) (1970) (FHLBB rule-making powers for mergers); 41 Fed. Reg. 9133 (1976) (to be codified in 12 C.F.R. § 571.5) (FHLBB policy on S&L mergers; factors considered include: antitrust laws; S&L holding company regulations; economic impact on competition as determined by (i) market concentration, (ii) actual or potential competition, (iii) trends toward concentration, (iv) overlap of branching systems of merging banks, and (v) extent to which rates paid appear to be competitively determined; convenience and needs of communities to be served; experience and performance record of persons to be in key managerial positions; probability of success; adequacy of net worth; fairness of merger plan; full disclosure of plan; officer compensation; employment contracts).

LIFE INSURANCE COMPANIES

N.Y. Ins. Law § 191(2) (McKinney 1966) (superintendent, passing upon insurance license, considers public demand for another insurance company); *id.* § 40(4) (foreign and alien insurers must have license, which may be refused if superintendent judges refusal in public interest; license permits statewide operation); *id.* §§ 486, 69-f (McKinney Supp. 1975-76) (approvals of mergers and holding company acquisitions do not invoke need test or similar criterion).

PRIVATE PENSION PLANS

The organization and operation of pension plans are not afflicted with a convenience and need test.

PROPERTY AND LIABILITY INSURANCE COMPANIES

Id. § 328 (McKinney 1966) (certificate for motor vehicle insurer depends on superintendent's finding that public interest is being promoted); *id.* §§ 40, 42 (McKinney 1966 & Supp. 1975-76) (rules for foreign and alien insurers same as in case of life insurance companies).

INVESTMENT COMPANIES

In general, investment companies are governed, insofar as requirements for chartering, doing business, merging and the like are concerned, by ordinary state business corporation law (or, in some cases, trust law). Even the federal rule governing investment company reorganizations (a term which includes mergers), Investment Company Act § 25, 15 U.S.C. § 80a-25 (1970), is essentially concerned with fairness, not competitive impact and public need. *Cf.* 15 U.S.C. § 80a-11 (1970) (offers to exchange securities).

88. *E.g.*, 12 U.S.C. § 1464(c) (1970 & Supp. IV 1974) (federal S&L may lend only on security of first mortgage on real estate within 100 miles of home office or within state or on security of savings account in S&L; exceptions noted).

ing rules,⁸⁹ seem confined to depository financial institutions.

In general, anticompetitive techniques are not applied to as many kinds of financial intermediaries as are techniques implementing the other strategies—for example, the technique of using insolvency funds to pay the claims of public suppliers of capital when an intermediary fails.⁹⁰ Private pension funds are not ordinarily governed by a need criterion, and price restraints on life insurance companies, private pension funds, and investment companies are nonexistent, weak, or not oriented to institutional safety.⁹¹ Most interestingly, geographically framed limits on the establishment of new offices are conspicuously absent or unimportant in the case of life insurance companies, private pension funds, fire and casualty companies, and investment companies.

It is possible that the focus of much anticompetitive regulation on depository institutions merely reflects a judgment that anticompetitive strategies are more likely to be effective in the regulation of those intermediaries. Restraints on the physical location of offices, to take the clearest case, may at least appear to have a *prima facie* chance of

89. Intrastate branching rules generally affect only commercial banks and mutual savings banks. A state may permit statewide branching, something less than statewide branching (*e.g.*, countywide branching), or no branching at all. *E.g.*, CAL. FIN. CODE § 500 (West 1968) (statewide branching of commercial banks); ILL. ANN. STAT. ch. 16½ § 106 (Smith-Hurd 1972) (no branch banking); MASS. ANN. LAWS ch. 167, § 60 (Michie/Law. Co-op 1970) (countywide mobile branch banking); *id.* ch. 168, § 5 (Michie/Law. Co-op 1970 & Supp. 1975) (savings banks may branch in same town and also into other towns of county that do not contain head offices of other savings banks or where commissioner opines that public convenience and advantage served); N.Y. BANKING LAW §§ 29, 105, 240 (McKinney 1971 & Supp. 1975-76) (branching throughout state permitted except that outside city or village of head office, bank cannot branch into city or village of population less than 50,000 in which principal office of another bank is located; applied to commercial and mutual savings banks). National banks follow the rules of the state in which they are located. 12 U.S.C. § 36(c) (1970).

No state currently permits banks chartered in another state or national banks whose home offices are in other states to establish new branches within its borders. Nor does any state permit acquisitions of in-state banks by out-of-state bank holding companies. A Maine statute that becomes effective on January 1, 1978, will permit the establishment or acquisition of Maine financial institutions by out-of-state holding companies if the state in which the holding company's subsidiary financial institutions principally operate substantially reciprocates the permission. ME. REV. STAT. tit. 9-B, § 1013 (West 1975 Pamphlet). The refusal by states expressly to allow acquisitions by out-of-state bank holding companies indirectly prohibits a bank holding company from acquiring a new bank in a state other than that in which its existing banks are located. *See* 12 U.S.C. § 1842(d) (1970) (unless state law explicitly permits acquisition of out-of-state bank, Board not to approve acquisition by bank holding company). By contrast, the bank holding company device may enable a banking organization to circumvent, within a state, a no-branching or county-wide-branching rule; since federal bank holding company law does not prohibit this technique, the holding company's ability to use it will depend on whether the state has enacted stricter legislation concerning bank holding company acquisitions. Some states have, *e.g.*, NEB. REV. STAT. § 8-901 to -904 (1974); some have not, *e.g.*, MASS. ANN. LAWS ch. 167A (Michie/Law. Co-op 1970 & Supp. 1975).

90. *See* pp. 86-90 *infra*.

91. *See* D. MCGILL, LIFE INSURANCE 776 (rev. ed. 1967) (life insurance rates not directly regulated); note 87 *supra*.

protecting depository institutions from competition (alias “overbanking”), while offering no hope whatsoever of effectively sheltering other institutions. Demand deposits and savings accounts are desired by many individuals precisely because of their extreme liquidity. Since millions of contingencies befall individuals who then desire prompt conversion of their savings into cash, depository institutions engage in frequent, continuous, and speedy transactions with their public suppliers of capital. With traditional technology, the only way of handling such high-volume, no-delay transactions was through face-to-face contacts at conveniently located outlets of the financial institution. Transactions with a life insurance company or pension fund are much less frequent and more leisurely. And until the advent of streamlined techniques for liquidating one’s investment in a money market mutual fund,⁹² dealing with a mutual fund seemed cumbersome in comparison to a depositor’s dealings with a bank. Thus, it is only the practical importance of many convenient outlets to depository institutions that ever suggested to legislators that restrictions on the physical locations of offices could effectively reduce competition.

All this may change, of course, as the revolution in electronic funds transfer systems progresses.⁹³ Customer-operated remote computer terminals can be deemed to be branch banks on the ground that they perform functions similar to those of traditional branches. Yet the technical ease with which these terminals can proliferate will inevitably make the cumbersome procedures for approving a new branch bank seem about as appropriate as having a special legislative enactment to charter each new bank or corporation—a practice which met a natural death from similar causes more than a century ago.⁹⁴ Extensive litigation has already been stirred by these terminals,⁹⁵ and the

92. See, e.g., Daily Income Fund, Inc., Prospectus 7-8 (July 3, 1974); Dreyfus Liquid Assets, Inc., Prospectus 9-10 (May 15, 1974). More recently two Dreyfus funds have advertised that their shareholders can withdraw money simply by writing checks. Wall St. J., Oct. 21, 1976, at 43, col. 5.

93. See Note, *Customer-Bank Communication Terminals and the McFadden Act Definition of a “Branch Bank”*, 42 U. CHI. L. REV. 362 (1975).

94. See H. BALLANTINE, CORPORATIONS 37-41 (rev. ed. 1946).

95. See, e.g., *Illinois ex rel. Lignoul v. Continental Illinois Nat’l Bank & Trust Co.*, 536 F.2d 176 (7th Cir. 1976), *cert. denied*, 97 S. Ct. 184 (1976) (customer banking communication terminals (CBCTs) of national banks are branches); *Independent Bankers Ass’n of America v. Smith*, 534 F.2d 921 (D.C. Cir. 1976) (CBCTs are branches for McFadden Act purposes); *Missouri ex rel. Kostman v. First Nat’l Bank*, 405 F. Supp. 733 (E.D. Mo. 1975) (off-premise electronic tellers constitute branch banking); *Colorado ex rel. State Banking Bd. v. First Nat’l Bank*, 394 F. Supp. 979 (D. Colo. 1975) (receipt of deposits by CBCT makes it branch; cash withdrawals do not); *Independent Bankers v. Camp*, 357 F. Supp. 1352 (D. Or. 1973) (since state law does not specifically permit automated tellers, national bank cannot use them).

Recently, the Comptroller of the Currency was ordered to rescind formally its ruling that CBCTs are not branches and to give written notice that any national bank that

results, though favorable to the antagonists because of the way in which existing statutes are written, will probably not survive future legislative action. In other words, some types of anticompetitive regulation are rotting as a result of technological change, and explicit policy analyses of the sort here engaged in may have the easy task of pushing over a deadwood structure.

1. *Costs*

Like the other strategies, the anticompetitive one does not appear to generate particularly high primary formulation costs. The need criterion, for example, does not appear to have been the product of massive empirical study and analytical debate. Even though direct enforcement costs tend to be low, secondary formulation costs are relatively high. For example, the cost of enforcing literal compliance with certain price restraints of a mechanical nature, *e.g.*, the interest ceiling on savings accounts, does not appear to be very high at all. Banks, unlike speeders on the highways, are too conspicuous and too stodgy to engage in widespread, straightforward disregard of numerical legal standards. Furthermore, once the obvious attempts at circumvention (like giving toasters or tennis rackets to new depositors) are identified and outlawed, bankers' compliance with the literal terms of regulation can be expected to follow automatically. But the low costs of direct enforcement of mechanical anticompetitive rules are almost inevitably matched by high secondary formulation costs. This proposition follows because many people who run financial institutions are marvelously ingenious and want to compete, at least when they think that their institution will benefit. There are tenacious attempts by many intermediaries to defeat the purposes of anticompetitive rules. Few things are so demoralizing—or, depending upon one's viewpoint, awe-inspiring—as were the succession of moves and countermoves engaged in by commercial banks and the Board of Governors of the Federal Reserve System during the late 1960s and early 1970s, when the Board decided to curb bank competition for funds.⁹⁶

operates a CBCT without specific branching approval from the Comptroller's office is in violation of an explicit court of appeals decision. *Independent Bankers Ass'n of America v. Smith*, [Current] FED. BANKING L. REP. (CCH) ¶ 96,901, at 82,158 (D.D.C. July 29, 1976), enforcing 534 F.2d 921 (D.C. Cir. 1976).

96. The process in the 1965-1973 period is traced in DePamphilis, *The Short-term Commercial Bank Adjustment Process and Federal Reserve Regulation*, NEW ENGLAND ECON. REV., May/June 1974, at 14. To avoid the impact of interest ceilings and reserve requirements banks resorted to creation or expansion of devices such as the federal funds market, negotiable certificates of deposit, the Eurodollar market, loan participation certificates, bank-related commercial paper, small-denomination "capital notes," the selling of ineligible acceptances, and the making of guaranties (in the guise of standby

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Although high, the secondary formulation costs generated by the need criterion, which limits market entries and extensions, differ from those caused by mechanical price restraints. Price restraints are costly because of the necessity for continuous formulation of new regulations. The need criterion, by contrast, is costly because it is so vague and because its operational specifications are rarely formalized in regulations.⁹⁷ Institutions that feel threatened by an applicant for entry therefore are frequently able to challenge the application. The result is a mass of extended cases and administrative proceedings.⁹⁸

The nearly universal requirement that insurance premiums not be inadequate constitutes a special case among the anticompetitive regulations. Some believe that insurance departments are so influenced by political considerations that their primary concern is to make a show of protecting consumers by resisting excessive rates rather than to protect insurance companies by encouraging adequate rates.⁹⁹ Insofar as that belief is true, direct enforcement and secondary formulation costs are low for the trivial reason that regulators are not seriously trying to make the standard of "adequate" rates effective. If they were trying, the pattern of costs would probably duplicate that generated by the equally vague need criterion.

In addition to high secondary formulation costs, techniques imple-

letters of credit) instead of loans. Most of the avoidance attempts were eventually met by new regulations. Given the interconnectedness of financial markets, the diversity of legal and organizational forms for achieving private objectives, and the unlikelihood that regulatory agencies will be able to recruit personnel who are significantly more ingenious than decisionmakers in the private sector, it is unrealistic to assume that mechanical anticompetitive rules can often be found which preclude expensive gamesmanship of this sort.

One might compare the story of bank fund competition to the insurance holding company movement of the late 1960s. Although the movement seems to have been a product of many forces, some specific activities were clearly aimed at circumventing mechanical legal rules, such as investment restrictions (or portfolio regulation generally) or laws such as N.Y. INS. LAW § 213 (McKinney 1966 & Supp. 1975-76), which imposes limitations on certain expenses of life insurers. See N.Y. INS. DEPT., REPORT OF THE SPECIAL COMMITTEE ON INSURANCE HOLDING COMPANIES 10 (1968); Note, *The Insurance Holding Company Phenomenon and the Search for Regulatory Controls*, 56 VA. L. REV. 636 (1970).

97. The need criterion and other aspects of the bank licensing decisions have been entertainingly discussed and debated in Scott, *In Quest of Reason: The Licensing Decisions of the Federal Banking Agencies*, 42 U. CHI. L. REV. 235 (1975); and Murphy, *What Reason for the Quest?: A Response to Professor Scott*, 42 U. CHI. L. REV. 299 (1975).

98. Admittedly, the costs of these proceedings conceivably could be classified as direct enforcement costs, even given my special definitions of "direct enforcement costs" and "secondary formulation costs." P. 27 *supra*. The classification actually chosen emphasizes the function of these proceedings as modes of specifying the law, rather than as ways of overcoming recalcitrance.

99. See, e.g., Mayerson, *Ensuring the Solvency of Property and Liability Insurance Companies*, in INSURANCE, GOVERNMENT, AND SOCIAL POLICY 146, 190 (S. Kimball & H. Denenberg eds. 1969).

menting the anticompetitive strategy display a second general property: a tendency to generate substantial amounts of all three types of indirect costs. Obviously, any kind of anticompetitive rule tends to take on a life independent of its original *raison d'être* because there will always be inefficient producers who appreciate shelter from competition and lobby accordingly. This is vividly illustrated by the interest ceilings on time deposits and savings accounts and by the prohibition against payment of interest on demand deposit accounts. Originally the ceilings were thought necessary to prevent recurrence of the ruinous competition that led to many bank failures during the Great Depression; prohibiting interest on demand deposits was more specifically linked to a desire to prevent the flow of funds from country regions to city banks, which would make "speculative" use of them.¹⁰⁰ Prominent modern students of the Depression assign virtually no causal role to the erstwhile freedom of banks to pay interest on time deposits and savings accounts.¹⁰¹ Nor has the general rule against interest on demand deposits proven particularly effective in denying city banks the use of funds from country regions. This ideal has been thoroughly thwarted by the federal funds market,¹⁰² and is probably unattainable in a modern, nationally integrated economy. All this is known, but the prohibition against interest on demand deposits and the interest ceilings on savings accounts and time deposits generally continue to apply. Their subsistence seems to depend on the political muscle of the many banks that fear competition.¹⁰³

Apart from serving ends ulterior to institutional safety, anticompetitive regulation may well lead to another kind of indirect cost: the unequal treatment of different socioeconomic classes. Some of this inequity results from the fact that market forces overcome and par-

100. 77 CONG. REC. 3729, 4165-66 (1933) (Sen. Glass); see S. REP. NO. 94-487, 94th Cong., 1st Sess. 10-11 (1975), reprinted in 121 CONG. REC. S21813-23 (daily ed. Dec. 11, 1975).

101. See L. CHANDLER, *supra* note 76; M. FRIEDMAN & A. SCHWARTZ, *supra* note 76; P. TEMIN, *supra* note 76. None of these commentators assign any role to the lack of ceilings. Temin concludes that the crisis of November and December 1930 was principally due to a rash of bank failures in cotton-growing areas and to the failure of one large New York bank (the Bank of the United States) because of fraud. *Id.* at 85, 90-93.

102. S. REP. NO. 94-487, *supra* note 100, at 20. Federal funds, narrowly defined, are the reserve funds of member banks of the Federal Reserve System that are lent or borrowed among member banks. A broader definition would include certain transactions with institutions other than member banks. On the operation of the federal funds market in general, see M. MAYER, *THE BANKERS* 206-23 (1974).

103. As passed by the Senate, the Financial Institutions Act of 1975, S. 1267, 94th Cong., 1st Sess., reprinted in 121 CONG. REC. S12837-45 (daily ed. Dec. 11, 1975), implemented many of the earlier recommendations of the Hunt Commission, REPORT OF THE PRESIDENT'S COMMISSION ON FINANCIAL STRUCTURE AND REGULATION (1971), including the elimination of interest rate ceilings and differentials. The bill's failure in the House was attributed to intense lobbying. See BUS. WEEK, Apr. 26, 1976, at 36.

tially negate the impact of anticompetitive regulation in an uneven manner. For instance, the differential between the interest ceilings on savings accounts in thrift institutions and those in commercial banks has as one purpose the prevention of successful competition by commercial banks for savers' money, so that the money can be captured in institutions that will use more of it for mortgage loans.¹⁰⁴ Thus, the ulterior purpose is to help housing, which is among the most enthusiastically promoted of our national priorities.¹⁰⁵ During all recent periods of tight money, however, the ceilings have actually caused massive disintermediation,¹⁰⁶ as savers have withdrawn their funds from savings accounts and invested them in non-price-regulated, higher-yielding investments like treasury bills and negotiable certificates of deposit.¹⁰⁷ Regulatory action has repeatedly encouraged disintermediation even though it is a highly predictable phenomenon.¹⁰⁸ A tragic consequence has been that the impact of the interest ceilings is borne by savers whose accounts are so small or whose financial sophistication is so limited that the transaction and information costs of switching to higher-yield investments are prohibitive.¹⁰⁹ During periods of disintermediation it is only the money of the smallest savers, who are often in the lower economic classes, that is captured at below-free-market prices for the ostensible¹¹⁰ benefit of home buyers,

104. S. REP. No. 94-487, *supra* note 100, at 13.

105. See note 72 *supra*.

106. "Disintermediation" is the process whereby financial intermediaries in general, or some classes of them, experience a net outflow of funds to capital suppliers. Ordinarily, the term connotes removal by capital suppliers of funds from financial intermediaries for the direct purchase of stock, bonds, government securities, mortgages, and other financial assets issued by ultimate investors (those who invest in real assets). Disintermediation typically occurs when the rate of return on directly held financial assets exceeds the rate of return paid by intermediaries by more than a normal margin.

107. S. REP. No. 94-487, *supra* note 100, at 9-15.

108. Cook, *supra* note 72, at 8.

109. Some of the discrimination has been coldly deliberate, as in the case of the Treasury Department's decision in 1970 to raise the minimum denomination in which treasury bills could be purchased from \$1,000 to \$10,000; the evidence is that this decision quite effectively and abruptly curbed the disintermediating activities of small savers. Mullineaux, *Interest-Rate Ceilings and the Treasury-Bill Market: Disintermediation and the Small Saver*, NEW ENGLAND ECON. REV., July/August 1973, at 19, 23-26. This is not to say that the housing advocates would not like to curb the disintermediating activities of large savers; they simply lack the power, since large investors have so many investment alternatives that anticompetitive regulation of all of them is not feasible.

110. Whether home buyers actually benefit even from successful governmental attempts to reduce the level of disintermediation is debatable. There are reasons to expect slippages between governmental programs and the cost and availability of mortgage credit for new and existing homes: bolstering funds held by thrift institutions may cause discretionary mortgage lenders, such as commercial banks and many mutual savings banks, to leave the mortgage market; and borrowers may step in who receive mortgage loans other than for the purchase of a home, *e.g.*, to finance a child's college education. See Cook, *supra* note 72, at 13.

who are typically in higher income groups.¹¹¹ The amount of interest income thus exacted from small savers is not a trivial sum.¹¹²

Another example of the inequity caused by the unevenness of anti-competitive regulation is a combined product of the price restraints and market entry limits on commercial banks. Such restrictions have a questionable impact on the competition faced by banks, with the exception that they may curb competition for loans to small, local business borrowers and for the checking and savings accounts of small depositors.¹¹³

Finally, as for the third type of indirect cost, it is likely that anti-competitive regulation generates a misallocation of resources insofar as it shields inefficient intermediaries and sustains a market structure different from that which would be dictated by unfettered competition. For example, almost all studies of bank profitability and economies of scale in banking suggest that the median size of commercial banks in the United States is too small to be efficient.¹¹⁴ Therefore, an enormous

111. See *Financial Institutions and the Nation's Economy (FINE)* "Discussion Principles": *Hearings Before the Subcomm. on Financial Institutions Supervision, Regulation and Insurance of the House Comm. on Banking, Currency and Housing*, 94th Cong., 1st & 2d Sess., pt. 1, at 113-14, 121 (1975-76) (oral and prepared statements of Prof. E.J. Kane of Ohio State University).

112. Dr. E.J. Kane, a visiting senior economist at the FDIC, recently testified that subsidizing the American homebuyer has cost the American saver \$30 billion since 1966. I FINE STUDY PAPERS, *supra* note 3, at 309.

113. See pp. 41-43 *infra*.

114. Empirical studies of bank costs and scale efficiencies agree that there are economies of scale in banking, although they do not agree on the size levels necessary to achieve maximum efficiency. See D. ALHADEFF, *MONOPOLY AND COMPETITION IN BANKING* 83 (1954) (costs declined until banks reached \$200 million asset level); L. GRAMLEY, *A STUDY OF SCALE ECONOMIES IN BANKING* (Federal Reserve Bank of Kansas City 1962), cited in Wu & Connell, *Merger Myopia: An Economic View of Supreme Court Decisions on Bank Mergers*, 59 VA. L. REV. 860, 879 n.104 (1973) (ratio of bank costs to bank assets declined from 2.78% for banks with \$1 million in assets to 2.39% for \$10 million banks and to 2.00% for \$100 million banks); Greenbaum, *Competition and Efficiency in the Banking System: An Empirical Research Project and its Policy Implications*, 75 J. POLITICAL ECON. 461, 473-74 (1967) (reduction in number of U.S. banks to approximately 100 would save \$1 billion a year in banking costs); Greenbaum, *A Study of Bank Costs*, 4 NAT'L BANKING REV. 415, 434 (1967) (optimum bank size about \$300 million). See also Benston, *Economies of Scale and Marginal Costs in Banking Operations*, 2 NAT'L BANKING REV. 507 (1965) (for most banking services except business loans, number of deposit accounts and loans explained much more of variance in operations costs than did average size of deposit accounts or loans).

An important qualification of the results of such studies is provided by other studies which indicate that the scale economies that clearly apply to individual banking offices do not extend to branching operations. F. BELL & N. MURPHY, *COSTS IN COMMERCIAL BANKING: A QUANTITATIVE ANALYSIS OF BANK BEHAVIOR AND ITS RELATION TO BANK REGULATION* 46-68, 181, 215, 217 (Federal Reserve Bank of Boston Research Rep. No. 41, 1968) (economies of scale may be offset by branching costs); Gilbert & Longbrake, *The Effects of Branching by Financial Institutions on Competition, Productive Efficiency and Stability: An Examination of the Evidence*, 4 J. BANK RESEARCH 154, 298, 304-06 (1973-74) (conclusions similar to Bell & Murphy); W. Longbrake, *Productive Efficiency in Commercial Banking: The Impact of Bank Organizational Structure and Bank Size on the*

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amount of misallocation is almost certainly being endured.¹¹⁵ Only those who make a fetish of large numbers are likely to be persuaded by a response that justifies entry restraints by pointing to the uncertain

Cost of Demand Deposit Services (FDIC Working Paper 72-10, 1972) (scale economies largely limited to banking offices). It has also been suggested that some scale efficiencies achievable by the use of automated equipment may be available to small banks through computer time-sharing. Baker, *Banking Competition in the Age of the Computer*, 90 BANKING L.J. 193, 206-07 (1973).

Evidence on bank profitability also strongly suggests that larger banks are more efficient. One study of profit statistics for all federally insured banks for the years 1954-1974 discovered that return on net assets rose from 11.43% for banks with deposits of less than \$5 million to 15.71% for banks with assets of more than \$100 million. Gallick, *Bank Profitability and Bank Size*, FED. RES. BANK OF KANSAS CITY MONTHLY REV., Jan. 1976, at 11, 12. For studies identifying other factors that affect bank profitability, see Ford, *Profitability: Why do some banks perform better than the average?*, 66 BANKING, Oct. 1974, at 29; Olsen, *How high-profit banks get that way*, 67 BANKING, May 1975, at 46.

Since the total assets of all United States banks approach \$1 trillion, Board of Governors of the Federal Reserve System, Federal Reserve Statistical Release H.8 (Sept. 8, 1976), an optimal bank size between \$300 million and \$100 million in assets would imply that the efficient number of banks in the United States might be as low as 3,300 to 10,000 banks. The actual number of banks is much higher (over 14,500). See note 246 *infra*.

115. One may consider new bank entry, branching, merger, and price restraints in succession. Logically, if the elimination of the need criterion as a restraint on new entrants were to have any impact at all, it would lead to beneficial challenges to large or small inefficient banks previously possessed of some local monopoly power. Empirical research on the impact of new bank entries under existing regulations seems, however, to have focused principally on the impact of new entrants on high concentration levels. High levels of concentration may pose policy problems because the banks dominating the concentrated markets are larger than is necessary to realize scale economies. Generally, the impact of new entrants on concentration has been found to be slight. See, e.g., Alhadeff & Alhadeff, *Bank Entry and Bank Concentration*, 20 ANTITRUST BULL. 471 (1975).

There is also evidence that new entry has salutary effects on the price of banking services, at least in the short run. Fraser & Rose, *Bank Entry and Bank Performance*, 27 J. FINANCE 65 (1972), studied *de novo* entry by independent bank units into certain small, well-defined banking markets in the Eleventh Federal Reserve District and did find significant changes in the services offered by the established banks in these markets. Loan-asset ratios increased, greater emphasis was placed on business and consumer loans, while the prices for key banking services apparently did not rise relative to those for markets in which there was no new bank entry.

Eliminating restrictions on branching might well have a noticeable impact. In view of the findings that branching costs may offset scale economies, see note 114 *supra*, expansion by banks via the branching technique may do little or nothing for the efficiency of the expanding bank. Nevertheless, if a large, efficient bank with its corresponding low costs opens a new branch in a new local market, it may prod existing banks toward greater efficiency. Or, if the regulators were to allow it, the new bank could drive the older, smaller banks out of business.

In addition, eliminating the need barrier to entry by merger (but not the applicability of sound antitrust principles) may have a desirable effect, but solid empirical evidence is sorely lacking. A study comparing 81 merging and 81 nonmerging banks in the Fourth Federal Reserve District found some evidence to suggest that, during the post-merger period, merging banks attempted to provide more credit to their respective communities than nonmerging banks. Smith, *The Performance of Merging Banks*, 44 J. BUS. 184, 187 (1971).

Finally, abolition of price restraints would probably lead to the improvement or demise of some inefficient institutions. The possibilities should not be overstated, however, since the prohibition against interest on checking accounts and the interest ceilings on savings

and perhaps controllable contingency that unrestrained competition would result in an unbearably concentrated banking industry dominated by a few national giants.¹¹⁶

2. Benefits

Even if effective, anticompetitive regulation provides only one type of benefit in terms of ensuring soundness—protection against failures due to the workings of competition. More generally, when effective, anticompetitive regulation reduces competitive pressures and creates monopoly rents which may serve to save some institutions that would otherwise have failed for reasons other than competitive pressure. These hypothetical institutions might have failed because they were operated inefficiently or dishonestly, or because management, reflect-

accounts and time deposits have not in fact prevented a substantial amount of competition among banks for funds. Instead of offering higher returns on deposits, banks have offered more services such as free checking, gifts, credit cards, and longer hours. In one study, the assumption that Regulation Q, 12 C.F.R. pt. 217 (1976), and the prohibition of interest on demand deposits are totally ineffective was used to derive an equation for the demand for money which yielded a better explanation of the monetary aggregates over the period 1880-1970 than would use of the opposite assumption. Klein, *Competitive Interest Payments on Bank Deposits and the Long-Run Demand for Money*, 64 AM. ECON. REV. 931 (1974). Klein explains the result on the theory that time and demand deposits provide a nonpecuniary return—their liquidity—which is not subject to regulation. Certain extra services, such as longer hours, directly affect the liquidity of a particular bank's deposits to its customers.

116. Yet essentially this argument seems to have been made. Verkuil, *Perspectives on Reform of Financial Institutions*, 83 YALE L.J. 1349, 1363-66 (1974).

Whatever the consequences of dreadful concentration in the apocalyptic world of "only" 100 to 500 United States banks, studies of the effects of existing levels of market concentration on loan interest rates have been inconclusive. In an early study relied upon in Verkuil, *supra* at 1364 n.97, Edwards examined business loan survey data for 48 metropolitan areas for 1955 and 1957. In the 1955 data, he found that a 20% increase in the market share held by the three largest banks did result in an increase in interest rates charged to small borrowers. In the 1957 data, he found no correlation between market concentration and interest rates. Edwards, *Concentration in Banking and Its Effect on Business Loan Rates*, 46 REV. ECON. & STATISTICS 294 (1964). A second study of 19 banking markets, using the two-bank market share as an index of concentration, found positive correlations. Edwards, *The Banking Competition Controversy*, 3 NAT'L BANKING REV. 1 (1965). But Edwards's methodology has been criticized. Bell & Murphy, *Impact of Market Structure on the Price of a Commercial Banking Service*, 51 REV. ECON. & STATISTICS 210, 210 (1969); Phillips, *Competition, Confusion, and Commercial Banking*, 19 J. FINANCE 32, 37 n.18 (1964). Moreover, other studies of the effects of market concentration on interest rates or price of other banking services have concluded that there is no significant correlation. Fleschig, *The Effect of Concentration on Bank Loan Rates*, 20 J. FINANCE 298 (1965); Phillips, *supra*; Taylor, *Average Interest Charges, the Loan Mix and Measures of Competition*, 27 J. FINANCE 793 (1968). But see Bell & Murphy, *supra* at 213 (concluding that concentration is positively correlated with cost of checking account services); Kaufman, *Bank Market Structure and Performance: The Evidence from Iowa*, 32 So. ECON. J. 429 (1966) (interest charged on loans directly related to concentration); Phillips, *Evidence on Concentration in Banking Markets and Interest Rates*, 53 FED. RES. BULL. 916, 925 (1967) (weight of evidence is that—with effects of loan size, bank size, region, and time removed—concentration was positively associated with interest rates in 19 metropolitan areas studied).

ing its own risk-return preferences or those of its elite suppliers of capital, deliberately took high risks. Yet anticompetitive regulation itself does not prevent incompetence, dishonesty, or the deliberate taking of high risks. There is no assurance that the monopoly rents generated by effective anticompetitive regulation will be sufficient to prevent an unacceptably high rate of intermediary failures due to causes other than competition.

One receives no greater encouragement from consideration of the magnitude and the certainty of the protection that anticompetitive regulation will provide. There are grave doubts whether it is very effective in reducing competitive pressures—doubts prompted by the ingenious responses of the regulated industry and the efficient adjustments of the capital markets to price restraints.¹¹⁷ Consequently, there is reason to question the size of the reservoir of monopoly rents that it creates.

The need criterion for entry, which affects many types of financial intermediaries, can be taken as an example for extended analysis. Entry regulation may well have an impact on the number of new institutions formed in a given period¹¹⁸ and, together with related restraints, may affect firm size generally. But several sets of reasons indicate that the criterion is likely to be substantially ineffective in reducing the competitive pressures faced by many institutions and, more importantly, in preventing their failure. In the first place, the criterion is vague and difficult to apply. If the index of need is whether the new entrant will be profitable, regulators will engage in the difficult art of market forecasting.¹¹⁹ Nor is the regulator likely to take into account subjective but vitally important factors such as the aggressiveness and imagi-

117. See note 96 *supra*. Good, direct statistical evidence that anticompetitive regulation does not prevent many failures is hard to come by because of the difficulty of identifying satisfactory control groups. All commercial banks are subject to many kinds of anticompetitive regulation, for example, and to compare bank failures today with some long-past era of virtually unregulated banking would establish little. Similarly, whether the existing different intensities of anticompetitive regulation of various classes of banks lead to differences in the failure rate is a difficult question: a real impact might be obscured by other factors, while an apparent impact might result from other differences.

118. See Peltzman, *Entry in Commercial Banking*, 8 J.L. & ECON. 11 (1965); Peltzman, *Bank Entry Regulation: Its Impact and Purpose*, 3 NAT'L BANKING REV. 163 (1965). Edwards & Edwards, *Measuring the Effectiveness of Regulation: The Case of Bank Entry Regulation*, 17 J.L. & ECON. 445 (1974), criticize an earlier study by Peltzman which found that regulation had reduced bank entry by 57% over the period 1937-1962. Using Peltzman's data and methodology, but including revisions required by their criticisms, the authors concluded that Peltzman had overstated the restrictive effect of regulation by almost 45%. *Id.* at 451.

119. Objective data such as the fact that existing institutions are not earning excessive accounting profits will prove nothing, since this fact is consistent with the incumbents' having some market power and using it to enjoy the inefficient life.

nation of the applicants. The regulator's judgment will prevail over that of the budding entrepreneurs and will anticipate the verdict of the market instead of testing it. If the index of need is the adequacy of existing institutional facilities, problems arise because there are a great number of factors that might be considered in determining adequacy; for example, there will be difficulty in securing information or consensus about the existing provision of services and difficulty in forecasting whether the new entrant would really do anything about the deficiencies.

Even if the need criterion were more precise, its application might have little effect on competition in the various lines of business.¹²⁰ Suppose, for example, that the strict application of the need criterion succeeds in keeping only one bank in each town in a state. Suppose also that there are the usual prohibitions against interest on demand deposit accounts and the usual interest ceilings on savings accounts and time deposits. Individual banks might superficially appear to have a stranglehold on local liquid savings, but in fact they will have to compete against suppliers of deposit substitutes. Corporate depositors might switch in part to Treasury bills; middle-class depositors to money market mutual funds; smaller depositors to thrift institutions. Moreover, the legal restrictions will not prevent the level of this competition from increasing sharply because of general economic developments, such as rising interest rates. Nor, if towns are close enough, will the restrictions prohibit some banks from competing among themselves in terms of longer hours, special services, and special products such as travelers' checks and credit cards.

Nor will the one-bank-per-town arrangement do much to ease competition on the investment side. Banks use their funds in five principal credit markets. They invest heavily in securities: in United States government securities, which are bought and traded in a decidedly national, competitive, and efficient market; in municipal securities, which are often purchased and traded in statewide or national markets; and in other widely traded investment securities. Banks also make consumer loans, for which they must compete with many retail stores, finance companies, and other nonbank lenders. They supply mortgage funds, but again must contend with other institutions—the thrifts, the life insurance companies, the REITs, mortgage companies, and others. In addition, they engage heavily in making short and medium-term business loans. Here they clearly predominate over other kinds

120. For a fuller exposition of the arguments on competitive impact, see Alhadeff, *supra* note 71, at 252-60.

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of lenders, but they still may have to compete with one another because many loans, especially the larger ones, are made in national markets. A bank in Chicago is quite able to participate in a lending syndicate that makes a loan to a business borrower in Savannah. Finally, many of them lend the use of their reserve balances in the federal funds market, which is basically national.¹²¹

In short, all that is left of the grandly anticompetitive aspirations of the system of banking fiefdoms is an ability of the lords to exact some modest monopoly rents from individual checking account holders, who have trouble finding convenient substitutes or competitive accounts, and small business borrowers, who often must rely on the local bank. All the other vassals have fled the manor.

Whether competition leads to an unacceptable number of failures is ultimately an empirical question, given some normative stipulation of the "unacceptable number." In considering the precise way in which competition might be expected to work its mischief, it seems unlikely that anticompetitive regulation will be an efficient or reliable device.

Competition reduces earnings, and earnings pressures arguably lead institutions to shift to high-risk, high-return (*i.e.*, "unsound") investments. The extent to which high-risk investments are made because of competition-induced earnings pressure is unknown. Moreover, the complex of actual anticompetitive regulations does not begin to control all factors that can cause earnings pressures,¹²² so the linkage between anticompetitive regulations and sound investments is likely to be weak. One would therefore suppose that regulation would be more sensibly geared to deal directly with unsound investment portfolios; anticompetitive regulation could be dropped and the task of ensuring such soundness left to portfolio regulation.¹²³

Lastly, even when anticompetitive regulation results in the financial institution's obtaining some monopoly rents, it is not clear that the precious cushion of safety will stay in its proper place. It is possible that the prize will be defiled in some secular environment of liberal dividends, generous compensation of management, or comfortable expense allowances.¹²⁴

121. See note 102 *supra*.

122. For example, regulation neither squelches all competition from nonbank borrowers, lenders, and investors, nor controls fluctuations in the demand for and supply of funds that are due to recessions, changes in the local or regional economy, and other general economic developments.

123. This suggestion assumes that portfolio regulation itself can be effective and otherwise desirable, a proposition disputed below.

124. It should be observed that there is no obvious general reason why drains on an institution such as losses due to insider dishonesty will not often absorb or even exceed

3. Summary

The preceding analysis yields three observations about anticompetitive regulation as a strategy for reducing the riskiness of financial intermediaries. That strategy tends to generate high secondary formulation costs. It often leads to substantial amounts of each of the three kinds of consequences herein classified as indirect costs. And it is remarkably ineffective. If any of the other strategies prove to be reasonably effective and less costly, anticompetitive regulation could readily be dismissed as redundant and even harmful.

B. Portfolio Regulation

Much of the effort that has gone into legal regulation of financial intermediaries has focused on their internal financial condition. An extensive array of legal rules has been developed to restrict the kind, amount, and valuation of assets in which each particular type of financial intermediary may invest.¹²⁵ There has been equally extensive

the institution's monopoly rents. Even if the insider were following a prudent parasite rule ("Don't take so much that you kill the host organism"), he might find the rate of failure among firms without monopoly rents, or even a higher rate, a prudent risk.

125. It is difficult to generalize meaningfully about asset restraints, beyond saying that they are usually designed to restrict institutions to less risky classes of investments. Thus, a common theme is to allow carte blanche investment in U.S. government securities, but to prohibit or limit investment in common stock or direct ownership of real estate. Another theme is to require minimal diversification, according to some simple mechanical rule. The asset restraints applicable to financial institutions include:

COMMERCIAL BANKS

A. *National Banks*: Under authority of statute, 12 U.S.C. § 24, para. Seventh (Supp. IV 1974), the Comptroller has issued regulations regarding the investment securities of national banks. 12 C.F.R. §§ 1.1-410, 18.6 (1976). There are also other statutory restrictions, e.g., 12 U.S.C. §§ 29, 371 (1970 & Supp. IV 1974) (real estate); *id.* § 84 (loans to one borrower).

B. *State Member Banks*: 12 U.S.C. § 335 (1970) (same restrictions as *id.* § 24, para. Seventh (Supp. IV 1974)).

C. *Other State Banks*: Some states restrict real estate holdings to use for a bank's offices and require the sale of other acquired real estate. E.g., CAL. FIN. CODE §§ 750, 751 (West 1968); N.Y. BANKING LAW § 98 (McKinney 1971). Other regulations mandate rules for the valuation of assets. E.g., *id.* § 104.

THRIFT INSTITUTIONS

A. *Mutual Savings Banks*: Some statutes provide for lists of assets which MSBs may legally hold. E.g., MASS. ANN. LAWS ch. 168, § 51 (Michie/Law. Co-op 1970 & Supp. 1976); N.Y. BANKING LAW §§ 35, 235 (McKinney 1971 & Supp. 1975-76). New York also imposes the same asset-valuation rule as for commercial banks. *Id.* § 242 (McKinney 1971).

B. *Savings and Loan Associations*: Both federal and state laws restrict the investments S&Ls may make. E.g., 12 U.S.C. § 1464(c) (Supp. IV 1974); CAL. FIN. CODE § 6702 (West 1968). There are also valuation rules. E.g., 12 C.F.R. §§ 545.18, 563.17-1(b) (1976); CAL. FIN. CODE § 8702 (West 1968).

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regulation of the kinds of liabilities or equity claims that each intermediary may issue, the preconditions of their issuance, and the methods of valuing them on balance sheets prepared for regulatory purposes.¹²⁶ Finally, there are important and sometimes complex rules

LIFE INSURANCE COMPANIES

For examples of minimum capital investment requirements, asset restrictions, and valuation rules for stocks and bonds, see N.Y. INS. LAW §§ 46-a, 79 to 82, 91 (McKinney 1966 & Supp. 1975-76). Roughly speaking, these provisions require the company, to the extent of its minimum capital or required policyholders' surplus, to invest in certain securities thought to be extremely safe. They permit investment of other funds in the more numerous, elaborately defined classes of "reserve investments," which are still quite conservative.

PRIVATE PENSION PLANS

Under federal law, pension plans are basically free from direct restraints on investment. There is a restriction on the amount of an employer's stock that certain plans may own. ERISA § 407, 29 U.S.C. § 1107 (Supp. IV 1974). And there are valuation rules. *Id.* §§ 103(b)(3)(C), 302(c)(2), 29 U.S.C. §§ 1023(b)(3)(C), 1082(c)(2) (Supp. IV 1974).

PROPERTY AND LIABILITY INSURANCE COMPANIES

For regulations concerning minimum capital investment, reserve and surplus fund investments, and valuation rules, see, e.g., N.Y. INS. LAW §§ 79, 80(2), 85, 85-a, 91 (McKinney 1966 & Supp. 1975-76). Unlike New York life insurers, these companies, after meeting "minimum capital" investment requirements, need invest amounts equal to only one-half of their reserves in cash and "reserve" investments. Other funds may be invested in a category of "residual and surplus fund" investments which includes all but certain prohibited securities (e.g., stock of insolvent companies). This difference partially explains why property and liability insurers invest so much more heavily than life insurers in common stocks. Other reasons are financial rather than legal.

INVESTMENT COMPANIES

Portfolio regulation of investment companies is radically different from that applied to most other financial intermediaries. The emphasis is not on permitted and forbidden classes of financial assets, but on ensuring that fund shareholders know, in a rough way, the risks they are facing. See, e.g., 15 U.S.C. §§ 80a-8(b)(1), -12(a), -13 (1970); 17 C.F.R. § 210.6-02(f)(1) (1976). The Investment Company Act's paucity of direct asset restraints is similar to ERISA's; but, since ERISA's funding rules are much more drastic than the Investment Company Act's restraints on leveraging, see notes 126 & 127 *infra*, an overall comparison would indicate that ERISA is geared much more to the substantive control of intermediary riskiness than is the Investment Company Act.

126. Some limitations on the types, amounts, and valuation of liabilities are listed below. Some of them, such as the prohibition against interest-bearing demand deposits, have already been classified under the anticompetitive strategy. This duality is not anomalous: although the strategies are analytically distinct, nothing prevents particular rules from exemplifying more than one strategy. As a historical matter, though, prohibitions against interest-bearing demand deposits were probably designed more to curb competition than to foreclose the type of portfolio of assets and liabilities that a risk-loving management might create, even in a noncompetitive environment. See p. 36 *supra*.

COMMERCIAL BANKS

A. *National Banks*: Restrictions on indebtedness and on standby letters of credit are included in 12 U.S.C. § 82 (1970); 12 C.F.R. §§ 11.7(c)(9)(viii), 14.5 (1976).

B. *Member Banks*: 12 U.S.C. § 371a (1970) (prohibiting issuance of interest-bearing demand deposits); *id.* § 372 (restrictions on bank's acceptance of certain instruments). Regula-

concerning the initial level of capitalization for the intermediary and the maintenance over time of certain levels of net worth, capital, or

tion Q, 12 C.F.R. § 217.3 (1976), imposes limits on the payment of interest on savings accounts and time deposits. Regulation H, *id.* § 208.8(d), provides that a standby letter of credit counts as a loan for purposes of statutory limits on loans.

C. *Other State Banks*: Among the restrictions on payment of interest on deposits are 12 U.S.C. § 1828(g) (Supp. IV 1974); 12 C.F.R. § 329 (1976); CAL. FIN. CODE § 854 (West 1968). For capital requirements tied to total indebtedness, see, *e.g.*, *id.* § 660. Under 12 C.F.R. § 337.2 (1976), standby letters of credit are treated as loans.

THRIFT INSTITUTIONS

A. *Mutual Savings Banks*: States prohibit MSBs from accepting certain deposits and regulate the interest and terms of deposits; they may also restrict nondeposit borrowings. *E.g.*, MASS. ANN. LAWS ch. 167, § 18B (Michie/Law. Co-op Supp. 1976); *id.* ch. 168, § 66; N.Y. BANKING LAW §§ 234, 237 (McKinney 1971 & Supp. 1975-76).

B. *Savings and Loan Associations*: No checking is allowed on savings accounts at insured S&Ls except in certain states. 12 U.S.C.A. § 1832(a) (West June 1976 Pamphlet); 41 Fed. Reg. 9297 (1976), *amending* 12 C.F.R. § 545.4-1(a) (1976) (FHLBB rule against checking). Similar rules are contained in CAL. FIN. CODE § 5003 (West Supp. 1976). For examples of federal and state limits on borrowing, see 12 C.F.R. § 563.8 (1976); and CAL. FIN. CODE § 6717 (West 1968).

LIFE INSURANCE COMPANIES

Regulation of insurance companies includes limits on the interest paid on preferred stock issued by the company. *E.g.*, N.Y. INS. LAW § 48(7) (McKinney Supp. 1975-76). Other regulation requires specific policy provisions and limits issuance of new policies to control the company's rate of growth. *E.g.*, *id.* §§ 208-a, 212 (McKinney 1966 & Supp. 1975-76). There are also rules for the valuation of life insurance and annuity contract reserve liabilities. *E.g.*, *id.* § 205. Valuation of reserve liabilities is at the heart of portfolio regulation of life insurance companies, just as the question of capital adequacy dominates discussions of commercial bank regulation. The difference stems from the fact that life insurance reserve liabilities are remote, contingent, and, though actuarially computable, can be valued at very different amounts depending on assumptions, for example, as to interest and mortality, and on the actuarial method. Commercial banks, by contrast, principally have liabilities which are short-term, fixed in amount, and not worth discounting to present value; the amounts and yields of their assets and liabilities are subject to short-term and intermediate-term fluctuations, creating a need for liquidity buffers and capital cushions. For an excellent discussion of problems inherent in the normal method of computing life insurance reserves, see Belth, *Life Insurance Reserves and the Regulatory Process*, in INSURANCE, GOVERNMENT, AND SOCIAL POLICY 95 (S. Kimball & H. Denenberg eds. 1969).

PRIVATE PENSION PLANS

In a sense, the participation rules, vesting standards, and benefit accrual requirements, ERISA §§ 201-211, 29 U.S.C. §§ 1051-1061 (Supp. IV 1974), constitute limitations on the kinds of liabilities that private pension plans may have. But these rules are designed to ensure fairness to individual participants and beneficiaries and to protect them from disappointment of just expectations, rather than to protect them as a group from the financial failure of the plan. The portfolio-type rules that do look toward plan soundness are the funding rules, discussed in note 127 *infra*.

PROPERTY AND LIABILITY INSURANCE COMPANIES

There are restrictions on certain risks and limits on certain expenses. See, *e.g.*, N.Y. INS. LAW §§ 315, 321, 324, 351 (McKinney 1966 & Supp. 1975). Most important, however, are the provisions on reserve liabilities. *E.g.*, *id.* §§ 74, 326, 352. For a good discussion of reserve liabilities, see S. HUEBNER, K. BLACK & R. CLINE, *supra* note 21, at 571-81. As in the case of life insurance reserves, most unearned premium and loss reserves of

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surplus.¹²⁷ Together, these restraints make up what is here called portfolio regulation, since they seek to reduce the riskiness of a financial intermediary by affecting its portfolio of assets and liabilities.

property and liability insurers represent contingent liabilities, which by ordinary accounting conventions are left off the face of balance sheets. But because of their great importance and essential relevance to the insurance business, they must somehow be accounted for in insurance company financial statements. Loss reserves are estimated by various accepted techniques. Unearned premium reserves, however, are computed by simply applying to prepaid premiums the fraction of the total insurance period that has yet to run. For example, if a homeowner has paid \$250 for a two-year fire insurance policy and 18 months have passed, the company's unearned premium reserves will include \$62.50 on account of that policy. (In practice, reserves are not computed for each policy and then added up; less precise, short-cut techniques are applied to whole blocks of policies.) These reserves are set up in recognition of at least three contingencies: policy cancellations, which under nonforfeiture laws entitle the policyholder to get back part of the premium paid; losses not yet incurred and therefore not reflected in loss reserves; and expenses not yet accrued in connection with such losses. But, unlike the method of dealing with life insurance reserves, the valuation of unearned premium reserves does not require a projection of expected outgo items of these three sorts, together with a discounting of the expected payments to present value. This difference appears to reflect the fact that property and liability insurance policies are usually written for much shorter terms than life insurance policies, thus making discounting to present value less important. Also, property and liability contingencies are less susceptible of precise actuarial treatment, thus making projections of outgo items riskier.

INVESTMENT COMPANIES

A registered open-end company cannot issue senior securities, but it may borrow from banks, subject to a 300% asset-coverage test; also, it is basically restricted to one class of preferred stock. 15 U.S.C. § 80a-18(f) (1970).

127. In considering the sample of such restraints given below, the vacuity of ordinary business corporation law's capitalization requirements should be kept in mind.

COMMERCIAL BANKS

A. *National Banks*: Initial capital requirements of national banks are set out in 12 U.S.C. § 51 (1970) (\$100,000, with exceptions). Prohibitions on withdrawal or reduction of this specified "legal" capital are given in *id.* §§ 56, 59. These rules are still fairly weak. Regulatory urgings toward maintenance of "capital adequacy" as a bank grows larger appear to rest on no specific statutory rule or delegation of rulemaking power to the Comptroller.

Although bank reserve requirements now seem principally to function as mechanisms for controlling the money supply, they were originally designed to provide a modicum of liquidity to protect against business fluctuations. R. ROBINSON, *THE MANAGEMENT OF BANK FUNDS* 73-75 (2d ed. 1962). National banks must, of course, be members of the Federal Reserve System. *See* 12 U.S.C. §§ 142, 282, 462 (1970). Actually, a bank's reserves are now among its most illiquid assets.

B. *State Member Banks*: The Board of Governors of the Federal Reserve System sets capital and surplus requirements for state banks applying for membership in the System; after admission, capital stock may not be reduced without the Board's prior approval. *Id.* § 329; Regulation H, 12 C.F.R. pt. 208 (1976). Within statutory limits, the Board also sets reserve requirements as percentages of deposits. 12 U.S.C. § 461(b) (1970); Regulation D, 12 C.F.R. pt. 204 (1976).

C. *Other State Banks*: States set minimum legal capital requirements for banks chartered under their laws, often according to the population of the location of the bank's head office. Amounts may range between \$50,000 and \$300,000. *E.g.*, CAL. FIN. CODE §§ 380, 381, 384 (West 1968 & Supp. 1976); N.Y. BANKING LAW § 4001 (McKinney 1971). They may also provide a remedy for capital impairment and regulate capital reduction. *E.g.*, CAL. FIN. CODE §§ 660, 661 (West 1968 & Supp. 1976); N.Y. BANKING LAW

1. Costs

Secondary formulation costs of portfolio regulation are at least moderate, because the perceived suboptimality of many current regulations has caused some regulatory agencies to engage in continuing research into both existing and potential rules and procedures.¹²⁸ Some of the research is so fundamental that it should be allocated to primary formulation costs and classified as oriented to the eventual production of new types of rules and procedures rather than to the improvement of existing ones. Unlike most of the primary formulation costs attrib-

§ 114 (McKinney 1971). States also establish reserve requirements. *E.g.*, CAL. FIN. CODE §§ 1251, 1253 (West 1968 & Supp. 1976); N.Y. BANKING LAW §§ 14(j), 107 (McKinney Supp. 1975-76).

THRIFT INSTITUTIONS

A. *Mutual Savings Banks*: State law requires minimum initial funds to incorporate, and also surplus funds for operation. *E.g.*, MASS. ANN. LAWS ch. 168, § 77 (Michie/Law. Co-op 1970); N.Y. BANKING LAW §§ 233, 243, 244 (McKinney 1971).

B. *Savings and Loan Associations*: The FHLBB promulgates rules (including minimum capital requirements) for organizing federal S&Ls and sets liquidity requirements. 12 U.S.C. §§ 1425a, 1464(a) (1970); 12 C.F.R. § 543.2(g) (1976); 41 Fed. Reg. 6062 (1976), amending 12 C.F.R. § 523.11 (1976). Some states also have minimum net worth requirements. *E.g.*, CAL. FIN. CODE §§ 6901, 6902(a) (West Supp. 1976).

LIFE INSURANCE COMPANIES

For examples of minimum capital requirements, see N.Y. INS. LAW §§ 77, 91(2), 191 (McKinney 1966 & Supp. 1975-76) (§1 million normally the minimum capital; other rules as to investment of capital funds and special reserve fund).

PRIVATE PENSION PLANS

Minimum funding standards are contained in ERISA §§ 302, 305, 29 U.S.C. §§ 1082, 1085 (Supp. IV 1974). ERISA's funding requirements, when viewed in conjunction with the sponsoring employer's liability for underfunding to the extent of 30% of its net worth, ERISA §§ 4062(a), (b), 4068, 29 U.S.C. §§ 1362(a), (b), 1368 (Supp. IV 1974), are the functional equivalent of a substantial net worth or capital adequacy requirement. If the plan's asset values decline or the actuary's projections prove too optimistic, the employer company will have to make larger contributions. The company finds out about such adjustments every three years, when the plan is valued. The system is analogous to an assessment plan of life insurance, which requires the premium payers periodically to adjust their premiums in light of the company's experience. The chief difference is that under ERISA the entity subject to varying premiums is usually a fairly large business entity, possibly possessed of more assets and less need for level premiums than the ordinary individual consumer of life insurance.

PROPERTY AND LIABILITY INSURANCE COMPANIES

In New York, for example, the types and number of lines of business determine the required paid-in capital. See N.Y. INS. LAW § 311 (McKinney 1966).

INVESTMENT COMPANIES

In general, the required minimum net worth is \$100,000. 15 U.S.C. § 80a-14 (1970); 17 C.F.R. §§ 270.14a-1, -2 (1976) (exceptions).

128. On the Federal Reserve Bank of New York's evolving research into an effective early-warning system, see note 170 *infra*. On the Comptroller's National Bank Surveillance System, see I FINE STUDY PAPERS, *supra* note 3, at 368-69, 398-99.

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utable to the other strategies, these are ongoing rather than sunk costs and are thus relevant to current policy choices.

Direct enforcement costs connected with portfolio regulation are apt to be very high, depending on whether regulators make it a practice to test for compliance by examining the records concerning each transaction.¹²⁹ In making this assessment, I have allocated to the category of direct enforcement costs a large portion of the costs of enforcing the elaborate reporting requirements imposed on all financial intermediaries and most of the costs of on-site examinations of all depository-type and most insurance-type financial intermediaries. This seems to be in accord with the common understanding of the regulators and regulated firms as to the main thrust of the examination and reporting processes.¹³⁰ Whether direct enforcement costs of effective portfolio regulation are *inherently* very high, however, is an open question. It is possible that costs could be substantially reduced without any significant loss of effectiveness by eliminating some of the details examiners must investigate.¹³¹ It is also possible that good mechanical rules, if possible to develop, could be enforced primarily through the reporting process, supplemented by special investigations in lieu of regular examinations.

Indirect costs other than the inefficiencies generated by portfolio regulation tend to be low. Although such regulation occasionally serves ends ulterior to safety, this is not an essential or general trait. Some

129. A very rough idea of the order of magnitude of direct enforcement costs is suggested by the bank regulatory agencies' employment figures. (Figures for insurance departments would be lower because the industry is so much smaller than the commercial banking industry. See Clark, *supra* note 1, at 1605-06 nn.3, 6, 7.) As of December 31, 1974, for example, about 72% of the 2,808 persons employed by the FDIC were bank examiners. [1974] FDIC ANNUAL REPORT 23. The Comptroller of the Currency, in a report to Congressman Reuss dated December 23, 1975, stated that his office had approximately 2,150 employees participating in bank examinations. I FINE STUDY PAPERS, *supra* note 3, at 362-64. By December 31, 1974, the professional staff of the examination departments of the Federal Reserve Banks had increased to 789 persons. *Id.* at 525. State examination departments vary, of course. One now-dated estimate put the total number of active bank examiners in the United States at about 7,500. M. MAYER, THE BANKERS 371 (1974).

As the text indicates, direct enforcement costs should also include most of the costs of preparing and submitting financial reports to regulatory agencies. But no figures are available from which to estimate those costs.

130. This is not to deny that examiners may discover violations of regulatory provisions that are not principally concerned with affecting the intermediary's portfolio. They may, for example, discover evidence of insider misconduct. Similarly, detailed reporting requirements alert regulators to possibly adverse changes in the financial condition of the reporting intermediaries, thereby leading the regulators to investigate the company and, perhaps, to discover misconduct.

131. For example, bank examiners traditionally evaluated all or most of a bank's loans. Following the recommendations of a study by Haskins & Sells, however, some bank examiners will stress review of a bank's internal controls, such as audits and prudent credit and investment rules. I FINE STUDY PAPERS, *supra* note 3, at 359, 395-98.

rules ostensibly geared to safety have indirect costs because they are animated by the desire of special interest groups to capture the funds of a given intermediary for investment in a favored sector. More typically, however, portfolio restraints are consciously directed by the legislature to ends other than institutional soundness because of the perceived public benefits of those ends. Perhaps the most striking example is the general restriction of savings and loan associations to investments in residential real estate mortgage loans. Similarly, a regulation like that prohibiting an institution from owning more than five percent of the outstanding voting securities of any one issuer¹³² is designed to prevent institutional dominance of portfolio companies rather than to ensure portfolio safety.

As for the second indirect cost, portfolio regulation may conceivably have discriminatory effects. It may make capital markets more favorable for governmental units (whose securities are frequently favored by statutory asset restraints and legal lists) than for the private sector. But the presence of unregulated investors, conflicting investment regulations, the interrelationship of capital markets, and the ineffectiveness of much portfolio regulation should considerably mitigate such effects.

The third indirect cost—the prevention of the efficient achievement of legitimate business goals—requires much more extended discussion. In analyzing this type of cost, useful insights are gained from portfolio theory, which is concerned with the proper methods of conceptualizing risks faced by investors and with methods of setting risk levels consistent with the highest possible return at each level.¹³³ If the costs of implementing new schemes of portfolio regulation are zero, it is unexceptionable that the law ought to constrain the portfolio risk of financial intermediaries through those techniques that least restrict management's ability to achieve the highest rate of return at the ceiling risk level.¹³⁴ If there are costs of implementation, no new scheme should be inaugurated unless the marginal social costs of implementing a less restrictive alternative do not exceed the marginal expected return that it produces for the intermediary.¹³⁵

132. Generally applicable rules of this nature were proposed by Senator Lloyd Bentsen in 1974. See *Stockholders Investment Act of 1974: Hearings on S.2842 & S.2787 Before the Subcomm. on Financial Markets of the Senate Comm. on Finance*, 93d Cong., 2d Sess. 5, 12-23 (1974).

133. For introductions to portfolio theory, see J. FRANCIS & S. ARCHER, *PORTFOLIO ANALYSIS* (1971); and K. SMITH, *PORTFOLIO MANAGEMENT* (1971).

134. A move from existing techniques to these "least restrictive" techniques would make the elite suppliers of capital better off without making the public suppliers of capital worse off. An economist would characterize this as a "Pareto superior" move.

135. Public policy might dictate that regulated intermediaries internalize the marginal social costs of a less restrictive mode of portfolio regulation—for example, by charging

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An investor evaluating her investment alternatives ought to consider not only the expected returns from prospective assets but also the riskiness of those assets, *i.e.*, some appropriate measure of the dispersion of numerous possible returns around the expected return. These risk-return characteristics of the assets should then be tested against the investor's preferences—the relative utilities to her of different combinations of risk and return.¹³⁶ Moreover, portfolio theory teaches that because of the phenomenon of covariation,¹³⁷ evaluation of investment assets should proceed in terms of alternative portfolios of assets, not on an asset-by-asset basis. The investor may be able to

them the additional costs of examinations and litigation occurring under the less restrictive mode.

Several viewpoints are possible. One is that the beneficiaries of regulation—taxpayers in general or the public suppliers of capital, depending on what one conceives the reasons for regulation to be—should bear all costs of achieving the targeted maximum level of portfolio risk, since risk regulation is for their benefit. Moreover, costs should be defined to include reductions in the portfolio returns reasonably expected by elite suppliers of capital. Moving to less restrictive portfolio regulation would then be viewed as a way of minimizing, among other costs, the amount portfolio returns are reduced (which the public capital suppliers bear directly and/or through compensation of the elite capital suppliers).

Lawmakers might choose instead simply to make the elite suppliers of capital bear all the costs of portfolio regulation, *i.e.*, to impose a “tax” on them for the benefit of the beneficiary class. The elite capital suppliers would “buy” less restrictive portfolio regulation by absorbing all the extra costs associated therewith. A tax of this kind will fall heavily upon the initial generation of elite capital suppliers. But if capital markets are reasonably efficient, the tax will eventually be reflected in the prices of the intermediaries' stocks, so that elite suppliers of capital to financial intermediaries would receive rates of return comparable to those earned by other elite capital suppliers. The tax might, however, permanently distort the allocation of resources between financial intermediaries and other sectors of the economy.

According to a third view, the beneficiaries should bear all costs strictly necessary to achieve the targeted ceiling on portfolio risks, and costs should be defined to exclude the reduction in expected return to elite capital suppliers. Regulated intermediaries (prompted by representatives of the elite capital suppliers) would be able to buy less restrictive portfolio regulation by bearing the additional costs of any regulatory mode that is more expensive to implement.

136. J. FRANCIS & S. ARCHER, *supra* note 133, at 17-21; K. SMITH, *supra* note 133, at 59-68.

137. R. BREALEY, AN INTRODUCTION TO RISK AND RETURN FROM COMMON STOCKS 115-16 (1969). To illustrate the impact of covariation in a simple case, consider three assets, *A*, *B*, and *C*, selling at an identical price. The investor can afford and wants to buy only two of the assets. *A*, *B*, and *C* each present an identical expected return and are equally risky by some appropriate measure. Variations from the expected return due to a contingent event, for example, a war, are expected to be positive for *A* and *B* but negative for *C*. Should the opposite state of affairs (peace) obtain, variations from the return are expected to be negative for *A* and *B* but positive for *C*. In all other respects, external economic changes affect the three assets identically. It should be obvious that the investor would do better to buy *A* and *C* or *B* and *C* rather than *A* and *B*. The total risk of the portfolio can be decreased, without reducing the expected return by choosing the assets whose returns covary negatively, since this characteristic should result in a partial smoothing of the fluctuations in future annual earnings that would be expected in a portfolio of positively covarying assets.

More practically—since negatively covarying securities are not common—a decrease in portfolio risk may result from selection of individual securities whose returns do not covary positively to a great degree.

reduce the risk of her total portfolio by choosing individually safer securities; by finding assets whose returns covary negatively or not too positively; and by increasing the number of her holdings.¹³⁸ While effective diversification depends heavily on one's ability to find assets whose returns do not have a strong positive covariance, returns on many kinds of investment assets covary positively to a significant degree.¹³⁹

Given portfolio theory's emphasis upon the whole portfolio, it has been easy to show that some traditional legal techniques of investment regulation are arbitrary and perhaps fruitless.¹⁴⁰ A state in excellent financial condition, for example, could restrict the state employees' pension fund to purchases of general obligations of the state, or to municipal securities and United States government securities.¹⁴¹ To be sure, the fund may be made extremely safe by this decision. But the same level of safety might have been attained or exceeded by any

138. *Id.* at 123-24. Brealey argues that while the riskiness of individual holdings and the degree to which they are independent of each other are important, increasing the number of holdings beyond a relatively small number (about 20 securities) typically has little impact on risk. *Id.* at 124-31. Not everyone, however, agrees with Brealey's apparent conclusion that there is no need to have more than 20 stocks in a portfolio. Langbein and Posner found that a carefully selected portfolio of about 30 stocks would be as much as 90-95% correlated with market movements. That portfolio would not eliminate all of the diversifiable risk (*i.e.*, unnecessary risk: a portfolio could be assembled which produced the same return at a lower risk level). Only when the portfolio reaches about 200 stocks is the range within which its return can be expected to fall reduced to 1% on either side of the market's return. Langbein & Posner, *The Revolution in Trust Investment Law*, 62 A.B.A.J. 887, 889 (1976); *see also* Langbein & Posner, *Market Funds and Trust-Investment Law*, 1 AM. B. FOUNDATION RESEARCH J. 1 (1976). Since selection of so many stocks can be quite costly if each is individually evaluated in relation to the portfolio, and since investment-fund managers have not systematically outperformed market averages, *id.* at 2, new funds are springing up which simply hold an extremely diversified portfolio of securities designed to approximate some broad index of capital-asset performance, such as Standard & Poor's 500 or the entire New York Stock Exchange. *Id.* at 1-2.

139. *See* Cootner, *The Liquidity of the Savings and Loan Industry*, in I STUDY OF THE SAVINGS AND LOAN INDUSTRY 283, 293 (I. Friend ed. 1969). The high correlation of yields is generally thought to be a reflection of the gross substitutability of financial assets and the degree to which the various capital markets are efficient and interrelated, rather than segmented.

140. *See* Note, *The Regulation of Risky Investments*, 83 HARV. L. REV. 603 (1970); *see also* Bines, *Modern Portfolio Theory and Investment Management Law: Refinement of Legal Doctrine*, 76 COLUM. L. REV. 721 (1976). Langbein and Posner argue that at least the most general standard of investment regulation, the prudent man rule applicable to trustees, ought to be interpreted by the courts as permitting use of modern portfolio theory, *e.g.*, as allowing a trustee to invest in a market fund. Langbein & Posner, *Market Funds and Trust-Investment Law*, *supra* note 138. Statutory legal lists, of course, cannot be changed by judicial interpretation.

141. The example in the text is extreme, but it is not unknown for a state's legal lists for governmental pension plans to give a conspicuous place to securities issued by its own instrumentalities. *E.g.*, CONN. GEN. STAT. ANN. § 7-447 (West 1969) (permits investment of municipal employee retirement funds in accord with investments permitted to savings banks, *id.* § 36-9c (West 1969 & Supp. 1976)).

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number of more flexible asset restraints, under which the fund managers, employing negative covariation, could have achieved a higher level of return for the plan participants and beneficiaries. If this be the case, the narrow rule is unduly restrictive. Although the example chosen may seem extreme, there is empirical evidence that conventional asset restraints applied to a large segment of all possible investors, such as a rule affecting commercial banks, may significantly shift demand for different classes of securities and affect the allocation of funds to them.¹⁴²

In its broadest sense, financial intermediation is a form of exploitation of market imperfections, since the intermediaries are skilled at reducing the transaction costs of matching capital suppliers and investors. But when, as in this article, attention is restricted to entities that pool risks in addition to matching savings and investments, financial intermediation may be characterized simply as the pooled exploitation of positive covariance.¹⁴³ The intermediaries make positive covariance work for them by owning some debt securities and issuing others. In this way positive covariance of the returns on different classes of financial assets may lead to decreased overall risks. For instance, imagine an intermediary that raises funds by selling, principally to small savers, three-month time deposits that pay 6% interest. It invests the funds in short-term (three-month) construction mortgages yielding 8%. Obviously, if market returns on such mortgages and prevailing yields on such deposits covary positively with external economic forces, the business of the financial intermediary is safer, not riskier, than if the opposite were true. Thus, whether mortgage

142. One study concluded that restrictions on the quality of bonds that national banks may hold altered the yield differential between investment-grade bonds and lower-grade bonds. West, *Bond Ratings, Bond Yields and Financial Regulation: Some Findings*, 16 J.L. & ECON. 159 (1973). West's statistical analysis suggested that the best explanation for the change in yields was that the Banking Act of 1936 gave the Comptroller the power to promulgate a rule restricting bank investments in bonds. Although the initial rule was nebulous, by 1938 a new rule had made it clear that banks were virtually restricted to investment-grade bonds. This led to extra demand for such bonds and lowered their yields.

It has also been found that a change in the way banks must account for earnings from government securities purchased at a discount resulted in a change in the yields on those securities. Prior to December 1964, the coupon income from bonds held as investments was reported as operating earnings. The gain from purchasing a bond at a discount and holding it to maturity was not reported as operating income but was added to capital. Since bank performance is usually measured by bank earnings, bankers preferred to invest in high-coupon bonds rather than in discount bonds. When Regulation F was revised in December 1964 to require that bond discounts be accrued to earnings, this extra demand for high-coupon bonds was eliminated, and the corresponding higher yields on discount bonds evaporated. See Wolf, *Regulation F and the Yield Structure of the U.S. Government Securities Market*, 2 J. MONEY, CREDIT & BANKING 112 (1970).

143. See Cootner, *supra* note 139, at 293-95.

yields go to 9% and deposit yields to 7%, or mortgage yields drop to 6% and deposit yields to 4%, the intermediary maintains its 2% gross spread. By contrast, given negative covariance, the external events in a given period might be such that mortgage yields go up to 9% while deposit yields go down to 5%, or they might produce mortgage yields of 7% and deposit yields of 6½%, leaving a gross spread that is inadequate to cover expenses. Because of the greater likelihood of large fluctuations in earnings, the negative covariance situation is riskier. Financial intermediation thus transforms positive covariance from an evil to the isolated saver into a good for collectivities of savers. Analysis of this aspect of the process helps one to understand why the capital structures of financial intermediaries are characterized by much higher leverage than those of ordinary industrial corporations or ordinary individual investors.¹⁴⁴ Indeed, under certain conditions a financial intermediary may operate safely, and even optimally, with nearly zero equity capital.¹⁴⁵

Application of ordinary portfolio theory to financial intermediaries requires one major expansion of its focus that is of the utmost importance to profit-maximizing managements and safety-conscious regulators. In the simplest cases dealt with by portfolio theory, one imagines an investor with a fixed supply of capital that can be used to acquire any one of a great number of portfolios of financial assets. The investor attempts to discern a frontier of efficient portfolios. Each portfolio on the frontier is such that there is no portfolio at its risk level with a higher expected return. Depending on her particular risk-return preferences, the investor would select a portfolio somewhere on the efficient frontier.

This simple case is inevitably complicated by the theorists. They add the assumptions that the investor can add leverage to a portfolio by borrowing and can make it safer by adding risk-free assets such as United States government securities. Given these assumptions, they derive the so-called separation theorem, which asserts that the task of finding the optimal portfolio of risky assets is independent from that

144. At the end of 1971, financial intermediaries as a group had liabilities estimated at \$1,400 billion and a net worth of \$100 billion. R. ROBINSON & D. WRIGHTSMAN, *FINANCIAL MARKETS: THE ACCUMULATION AND ALLOCATION OF WEALTH* 229 (1974). Ordinary business corporations, of course, leverage to a much lesser degree; typically, common stock is significantly more than half a company's total capital. See B. GRAHAM, D. DODD & S. COTTLE, *SECURITY ANALYSIS* 546-47 (4th ed. 1962).

Of course, positive covariance is only part of the leverage story: if the spread between asset yields and liability yields is too small, high leverage may be unsafe. The spread in turn depends on persistent market imperfections.

145. Pringle, *The Capital Decision in Commercial Banks*, 29 J. FINANCE 779, 788-89 (1974).

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of achieving the desired level of portfolio risk. In other words, the rational investor can identify the optimal portfolio on the efficient frontier without regard to her individual risk-return preferences. The latter are accommodated by adjusting the mix between risky assets (the optimal portfolio) and risk-free assets, or by leveraging. Putting some of the fixed supply of capital into risk-free assets rather than investing all of it in the optimal portfolio will produce a total portfolio with lower overall risk and smaller expected returns. Putting all of the equity capital plus the proceeds of borrowed funds into the optimal portfolio will produce a greater overall risk and higher expected returns. Note that changes in the amount of equity or debt capital an investor has and uses enter the analysis only in a subsidiary way. Borrowing is one way of adjusting risk and getting the advantage of the optimal portfolio, and it is assumed to be within the control of the investor, at least to the extent necessary to achieve the desired risk level.¹⁴⁶

When portfolio theory is applied to financial intermediaries, this approach simply will not suffice. It is a salient characteristic of most financial intermediaries that flows of capital into and out of the entity are (1) continuous, varying, and only statistically predictable, and (2) to a significant degree, not within the immediate or short-run control of the intermediary. Commercial banks, for example, are legally obligated to pay when depositors request withdrawals from their demand deposits. The withdrawals are not uniform, and it thus becomes a matter of greatest importance to the bank, in deciding upon its investment, lending, and borrowing strategies, to predict the levels of deposit shocks and the probabilities of different variations from these expected changes.¹⁴⁷

If an extraordinarily large number of withdrawals are requested on a given day, the unprepared bank may be faced with the immediate problem of having exhausted all its cash, highly liquid securities, and "instant" borrowing avenues. It may be forced to sell comparatively illiquid assets such as long-term municipal securities or business loans at distress prices, and it may have to incur excessive transaction costs.¹⁴⁸

146. On efficient frontiers, the separation theorem, and other basic aspects of portfolio selection, see R. BREALEY, *supra* note 137, at 115-21; J. FRANCIS & S. ARCHER, *supra* note 133, at 22-26, 59-75, 111-17; and K. SMITH, *supra* note 133, at 124-54.

147. One recent study of bank portfolio behavior assigned great weight to the role of deposit variability. See D. HESTER & J. PIERCE, *BANK MANAGEMENT AND PORTFOLIO BEHAVIOR* 19-23, 35-37, 46-48, 67-71, 202-12 (1975).

148. By "distress prices" I mean prices that are lower than those available in the market to sellers who are allowing themselves a greater (but not abnormal) time for selling. By "excessive transaction costs" I refer to those extra (though routine) transaction costs that are incurred by disposing of relatively illiquid securities to meet liquidity

Of course, if the bank keeps a liquid assets buffer larger than it needs, it sacrifices the higher returns usually associated with less-liquid assets. Thus, whatever the ideal mix between safety and pursuit of profit, it will be impossible to achieve it efficiently without a careful projection of expected deposit shocks and their expected range of variation.¹⁴⁹ Similarly, a life insurance company expects a certain future stream of premium receipts—taking account of lapses, forfeitures, surrenders, renewals, and the like. The company has no choice but to pay out benefits when an insured person dies, whether or not the market values of its long-term bonds have dropped. Instead of maintaining a buffer of liquid assets to meet such contingencies, life insurance companies seek to predict them with the greatest possible accuracy. The actuary is thus as indispensable to investment strategy as is the analyst of investment assets.

Put differently, investment portfolio risk must be assessed in light of the investor's liquidity needs, which may be great or trivial. An extended but more accurate statement is that in order to evaluate the risk-return combination presented by a particular financial intermediary, one must examine not only the expected asset yields, the uncertainty surrounding each yield, and the covariance among them, but also the expected inflows and outflows of capital funds,¹⁵⁰ the uncertainty surrounding those capital flows, and the covariance among capital flows and investment yields.

Not surprisingly, the old-fashioned, piecemeal approach to ensuring asset safety by restraining the riskiness of assets on a one-by-one basis finds a parallel in regulatory techniques that attempt to constrain the riskiness of investment assets and to restrain the risk presented by the intermediary's obligations almost as if they were independent and unrelated matters.¹⁵¹ Even the occasionally astute commentator relying

needs, and that exceed the extra yield obtained from such securities. In practice, differences in routine transaction costs involved in using cash or converting other kinds of assets into cash appear to be more important in shaping the details of liquidity management practices than are possible sales at distress prices. See Barth & Bennett, *Deposit Variability and Commercial Bank Cash Holdings*, 57 REV. ECON. & STATISTICS 238 (1975).

149. Because of this article's concern with soundness regulation, the discussion is focused on sudden net deposit withdrawals. How a bank uses sudden net deposit inflows obviously has much to do with its relative profitability. See D. HESTER & J. PIERCE, *supra* note 147, at 231-49.

150. By "capital funds" I mean both debt and equity capital, including monies paid by public suppliers of capital (e.g., insurance premiums). Conversely, "outflows of capital funds" encompasses payouts of all sorts, including insurance payments, deposit withdrawals, and mutual fund dividends.

151. Most obviously, thrift institutions are pressured by legal rules into lending too long in relation to their liabilities, which are predominantly short-term. For most other intermediaries, asset regulation does take account of liability structure, or vice versa, in a very rough way. The problem lies in the roughness.

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on modern portfolio theory has been led astray.¹⁵² The regulatory devices that do exist for looking at riskiness holistically, such as bank "capital adequacy" requirements, are crude and inadequate.

That the nature of the obligations becomes overwhelmingly important when portfolio theory is applied to financial intermediaries can be appreciated from a somewhat different perspective if one thinks about two traditional categories of risks. The first is the risk that the investment analyst's favored projection of future cash flows from a security will turn out to be wrong. In the case of common stocks, this risk is captured in statistical notions of "variance" from projected earnings; for convenience, it will be termed "variance risk." In the case of debt securities, such variance has a simpler structure and may be termed "default risk." The basic response to either kind of risk is efficient diversification. A second category of risk is market risk: the risk that the market price of a debt security will go up or down because of a general decrease or increase in yields on other debt securities of comparable default risk, or the risk that the price of a particular common stock will fluctuate as a result of changes in the general rate of capitalization applied by the securities market to other stocks of comparable variance risk.¹⁵³

The market risk theoretically presented by different classes of assets only presents a real risk to financial intermediaries when their obligations have certain characteristics; the risk to the intermediary varies with the degree of abstract market risk *and* the severity of its liquidity problems.¹⁵⁴ The literature of portfolio theory often appears to ignore the relations between abstract market risk and liquidity needs.¹⁵⁵

152. *E.g.*, Note, *supra* note 140. Although this excellent Note uses modern portfolio theory as a basis for criticizing existing legal regulation of the investments of institutional investors, it does not adequately emphasize the relationship between an institution's assets and its obligations.

153. For a simple discussion of the distinction between market risk and variance risk, see V. BRUDNEY & M. CHIRELSTEIN, CASES AND MATERIALS ON CORPORATE FINANCE 997 (1972).

154. An intermediary that is able to keep its assets and redeem them at their maturity dates is not affected by intervening fluctuations in market prices of the assets. For an intermediary forced by liquidity problems to redeem some of its assets before maturity, market risk creates a real danger that the obtainable price will not equal the planned-for maturity value, thus aggravating the liquidity problems. *See also* note 207 *infra*.

155. Unlike basic portfolio theory, recent literature on the theory of the term structure of interest rates has been explicitly concerned with the impact upon investment decisions of the different liquidity needs of different investors. In general, "term structure" is the name applied to the pattern of yields on securities which differ only in their term to maturity. *See generally* B. MALKIEL, THE TERM STRUCTURE OF INTEREST RATES (1966); D. MEISELMAN, THE TERM STRUCTURE OF INTEREST RATES (1962); C. NELSON, THE TERM STRUCTURE OF INTEREST RATES (1972); McElhattan, *The Term Structure of Interest Rates and Inflation Uncertainty*, FED. RES. BANK OF S.F. ECON. REV., Dec. 1975,

Furthermore, though the theory's expansion to include this kind of problem is not conceptually difficult, it may be a costly and tedious matter to work out practical applications. Consider, for example, that it is not always the case that the obligational context should be taken simply as an exogenous variable, and the asset structure adjusted accordingly. The nature and amount of obligations, as well as the nature and amount of assets, may be determinable by management to a certain extent. In the case of an institution with considerable flexibility on both sides, such as a commercial bank, the problem of efficiently reducing risks becomes complex. It is not surprising that formal econometric models of the process of bank portfolio management so far have had to simplify the problem by assuming that variations in bank liabilities are of external origin,¹⁵⁶ even though bankers themselves have purported to rely heavily in recent years upon "liability management" as a way of meeting liquidity needs.

The current and potential achievements of portfolio theory suggest grave doubts about the wisdom of continuing many existing techniques of portfolio regulation. Legal rules currently in effect were not framed with the lessons of standard portfolio theory in mind, nor, obviously, in light of the sophisticated expansions of that theory which are clearly required.¹⁵⁷ They thus seem likely to be arbitrary and unduly restrictive.

Of course, the criticism of undue restrictiveness can apply, if at all, only to types of portfolio regulation that actually restrict the ability to take risks. If other types of portfolio regulation are ineffective, the appropriate criticism is that they create costs without producing benefits. Such fruitless regulations should be eliminated even before less restrictive alternatives are found. Which regulations should be eliminated depends upon an assessment of the benefits generated.

2. *Benefits*

Although incomplete, the type of protection provided by portfolio regulation is more closely linked than that of anticompetitive regulation to the ultimate goal of preventing public suppliers of capital from bearing the consequences of an intermediary's failure. Portfolio regula-

at 27; Modigliani & Shiller, *Inflation, Rational Expectations, and the Term Structure of Interest Rates*, 40 *ECONOMICA* 12 (1973); Modigliani & Sutch, *Innovation in Interest Rate Policy*, 56 *AM. ECON. REV.* 178 (1966).

156. See D. HESTER & J. PIERCE, *supra* note 147, at 38, 65-66.

157. Attempts have already been made to apply modified portfolio theory to financial intermediaries. *E.g.*, Hart & Jaffee, *On the Application of Portfolio Theory to Depository Intermediaries*, 41 *REV. ECON. STUD.* 124 (1974).

tion tries to prohibit management from taking excessive risks in the financial decisions that are a necessary part of financial intermediation. Risks arising from managerial dishonesty and self-dealing are occasionally the thrust of an asset restraint, such as the prohibition on loans by pension funds to a “party in interest,”¹⁵⁸ but these rules are here stipulated to belong under the heading of insider misconduct regulation, which is treated subsequently.¹⁵⁹ By definition, then, portfolio regulation aims only at preventing failures due to a subclass of the important risks faced by financial intermediaries. It is possible, however, that strict portfolio regulation tends indirectly to reduce insider misconduct.¹⁶⁰

a. *Effectiveness: The Empirical Evidence*

The order of magnitude and the certainty of protection afforded by portfolio regulation may be treated together as the question of its “effectiveness,” with attention given to the separate elements only when to do so would be especially illuminating. In considering how effective portfolio regulation is likely to be, it is useful to distinguish direct restrictions on the kinds of assets an institution may acquire from what will be referred to as “balance-sheet shaping rules.” The direct asset restraints include, for example, the prohibition against banks owning common stock in their own right¹⁶¹ and the restriction of life insurance company bond investments to high-grade issues.¹⁶² The balance sheet restraints include complexes of interrelated rules concerning valuation of assets and liabilities, leverage, capital, liquidity, and investment limitations that vary with the preceding factors.

There is no doubt that asset restraints, embodied in legal lists or rules about permissible kinds of investments, *can* be made (and have been made) effective reducers of risk if they are sufficiently extreme. In fact, the makers of legal lists of bonds for various kinds of institutional investors have succeeded in pinpointing securities with low default risk.¹⁶³ Just as clearly, however, it is difficult to formulate

158. ERISA § 406(a)(1)(B), 29 U.S.C. § 1106(a)(1)(B) (Supp. IV 1974).

159. See pp. 77-86 *infra*.

160. One study suggests that embezzlement frequently takes the form of fictitious loans entered upon the books over time. Meyer & Pifer, *Prediction of Bank Failures*, 25 J. FINANCE 853 (1970). This is not to say that detection of embezzlement by inspection of the earnings record is a reliable procedure. See pp. 60-63 *infra*.

161. Banks usually cannot own stock other than as trustees because the power to do so is not given to them in the laws governing corporate powers. See, e.g., 12 U.S.C. § 24, para. Seventh (Supp. IV 1974) (explicit denial of power to purchase stock for own account). The rule is cluttered with exceptions.

162. See, e.g., N.Y. INS. LAW § 81(2) (McKinney Supp. 1975-76).

163. W. HICKMAN, CORPORATE BOND QUALITY AND INVESTOR EXPERIENCE 211-14 (1958).

effective asset restraints that do not generate serious costs by being too restrictive.

Moreover, less primitive restraints may reduce costs but greatly impair the effectiveness, or at least the certainty of protection. Consider again the example of the state employees' pension fund that is restricted by law to investment in government securities. Allowing the fund to invest in any bonds, but not in stocks, would make it possible for the fund to approach more closely the investment portfolio that offers the highest return at the maximum risk level countenanced by legal regulation. But, since risky bonds are not unknown, it would be possible for the fund to exceed the desired maximum risk level without violating a specific legal rule. Sailing between the Scylla of ineffectiveness and the Charybdis of indirect costs requires no mean navigational skill. If existing regulation reflects that skill, the fact has not been objectively demonstrated.

Balance-sheet shaping rules are much more difficult to evaluate. Their use is based upon a mediating assumption: if information from balance sheets and other financial statements can be used to predict bank failures, then rules requiring that balance sheet quantities and ratios have certain properties may help prevent failures. Faith in the effectiveness of the existing kinds of rules is virtually instinctual; they continue to be used in spite of a fair amount of negative empirical evidence. To be sure, financial ratios have been successfully used to predict the failures of industrial corporations.¹⁶⁴ The ratios have been less useful, however, in predicting failures of financial intermediaries.

Meyer and Pifer applied multivariate discriminant analysis with 160 variables derived from financial statements to explain insured commercial bank failures between 1948 and 1965.¹⁶⁵ Using a score employing the nine variables found most significant,¹⁶⁶ they could pre-

164. Altman, *Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy*, 23 J. FINANCE 589, 609 (1968). Using a technique known as multivariate discriminant analysis, Altman combined five financial ratios of industrial firms to produce a score for each firm. The variables used were: (1) ratio of working capital to total assets (liquidity), (2) retained earnings/total assets (age of firm), (3) earnings before interest and taxes/total assets, (4) market value of the equity/book value of the total debt, and (5) sales/total assets (capital turnover). In 94% and 96% of the cases in two samples, firms with scores falling below a certain cutoff point were correctly predicted to go bankrupt within two years. Obversely, predictions of nonbankruptcy for firms above the cutoff was 79% accurate in the extreme case of firms with prior losses, and better for others. Later work produced similar results. Altman & McGough, *Evaluation of a Company as a Going Concern*, 138 J. ACCOUNTANCY, Dec. 1974, at 50 ("Z" scores based on discriminant analysis better predictors of failure than auditor).

165. Meyer & Pifer, *supra* note 160.

166. The significant variables, when using data up to one reporting period prior to failure, were:

(1) the error in predicting the ratio of cash and securities to total assets (*i.e.*, a measure of abrupt changes in the bank's liquidity);

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dict failures with modest success. But if it were thought important from a regulatory viewpoint that the cutoff point catch a very high proportion, say 99%, of the forthcoming failures, then perhaps half of all banks would be classified as potential failures.¹⁶⁷ The lower predictive power of the technique for bank failures than for industrial corporation bankruptcies might be attributed to the greater incidence of embezzlement in banks¹⁶⁸ and the difficulty of detecting it in financial statements.

With the predictive net so indiscriminating in its catch, regulatory requirements that various financial ratios meet certain levels would be arbitrary, unfair, and unduly restrictive. This recognition has percolated into the consciousness of some of the bank regulatory agencies,¹⁶⁹ but ratio analysis by bank examiners is still common and

- (2) the variability in the interest rate paid on time deposits;
- (3) the ratio of time deposits to demand deposits for the year previous to the last full calendar year of operation;
- (4) the ratio of operating income to total assets for the year previous to the last full calendar year of operation;
- (5) the growth of the ratio of consumer loans to total assets;
- (6) the growth of the ratio of cash and securities to total assets;
- (7) the variability of total loans;
- (8) the ratio of real estate loans to total loans; and
- (9) the ratio of fixed assets to total assets for the year previous to the last full calendar year of operation.

Id. at 860-63. Note that no recognized capital adequacy ratio is included in the list.

167. The figures given in the text are guesses, but they appear to be reasonable guesses. (I resort to guess because predicting 99% of failures forthcoming in, say, the next two years strikes me as an intuitively plausible regulatory goal.) The estimate in text is interpolated from a table in *id.* at 863.

168. See pp. 12-13 & notes 45-48 *supra*.

169. The Comptroller of the Currency has emphasized that ratio analyses are suggestive and that other, less tangible factors are considered in examinations. Although he set forth a new ratio test in 1974, he also said, "While some statistics and ratios are necessary, please understand that I am depending primarily upon your [bank examiners'] professional ability and judgment, not ratios, to disclose those serious banking matters requiring our attention." *Problem Banks: Hearing Before the Senate Comm. on Banking, Housing and Urban Affairs*, 94th Cong., 2d Sess. 21 (1976).

Likewise, Governor Robert Holland, on behalf of the Board of Governors of the Federal Reserve System, stated:

Although there are benchmark measurements for some of these factors as illustrated in the attached description of the uniform system for rating banks . . . , considerable judgment by individuals with years of experience is brought to bear in the final decision as to whether or not a particular institution should be considered as warranting special surveillance.

Id. at 131. Similar remarks were made in another context by Frank Wille, then Chairman of the FDIC. *Financial Disclosure by Banks and Bank Holding Companies: Hearings Before the Senate Comm. on Banking, Housing and Urban Affairs*, 94th Cong., 1st Sess. 39-40 (1975).

These concessions to empiricism are less than wholly reassuring for a number of reasons. First, as the cited remarks indicate, examiners do continue to rely on unproven ratio analyses; these analyses may even predominate in practice. Second, the "professional judgment" of examiners has not been proven to be any better than ratio tests as a medium-term predictor of failure. See note 173 *infra*. Lastly, the imprecision of ratio tests is not necessarily perceived by legislators; yet their support for new regulatory directions is quite important.

still important in their overall evaluations of banks. Meanwhile, researchers are suggesting that their results at least have utility in enabling regulators to reduce the number of banks requiring close scrutiny and, thus, to make more efficient use of examining personnel. Indeed, recent work using multivariate discriminant analysis has focused on predicting from financial reports whether examiners will give a bank a low rating¹⁷⁰ or put it on the problem bank list.¹⁷¹

How much is gained from an ability to predict from periodic reports submitted by banks whether they will be rated as problems on their next examination is not entirely clear. Post-examination regulatory ratings of banks are certainly not conclusive. A significant number of failed banks were not on problem bank lists.¹⁷² And the lists contain many banks that do not fail, though the extent to which this reflects regulatory medicine rather than spontaneous remission is not known. Moreover, one study of an important aspect of examinations, the examiners' criticism of loans, concluded that evidence is lacking to support the agencies' belief that loan criticism prevents or even predicts loan losses.¹⁷³ There is more than enough doubt to warrant further research into what, if anything, is being accomplished by the nation's several thousand bank examiners. In any event, financial early warning systems that predict evaluations by examiners have a solipsistic quality. Capital adequacy ratios, for example, will have "predictive

Some state regulatory agencies are also acutely aware of the drawbacks of present modes of financial regulation. See, e.g., N.Y. INSURANCE DEP'T, REGULATION OF THE FINANCIAL CONDITION OF INSURANCE COMPANIES (1974) (a remarkably perceptive report).

170. Stuhr & van Wicklen, *Rating the Financial Condition of Banks: A Statistical Approach to Aid Bank Supervision*, 56 FED. RES. BANK OF N.Y. MONTHLY REV. 233 (1974) (attempt to isolate objective variables from examination reports which "explain" overall bank ratings by examiners); Korobow & Stuhr, *Toward Early Warning of Changes in Banks' Financial Condition: A Progress Report*, 57 FED. RES. BANK OF N.Y. MONTHLY REV. 157 (1975) (extends Stuhr & van Wicklen but uses reported data instead of examination data and examiners' ratings); Korobow, Stuhr & Martin, *A Probabilistic Approach to Early Warning of Changes in Bank Financial Condition*, 58 FED. RES. BANK OF N.Y. MONTHLY REV. 187 (1976) (best six variables for producing efficiency gains in personnel allocation).

171. Sinkey, *A Multivariate Statistical Analysis of the Characteristics of Problem Banks*, 30 J. FINANCE 21 (1975) (Type I error probability (failure to classify a problem bank) was 28%, and Type II error probability (classifying a non-problem bank as a problem) was 21%). See also Sinkey & Walker, *Problem Banks: Identification & Characteristics*, 5 J. BANK RESEARCH 208 (1975).

172. Sinkey & Walker, *supra* note 171, at 211, point out that between 1959 and 1972, 60 insured banks failed, and of these 36 were on the problem bank list. The other 24 were apparently embezzlement and fraud cases—as, probably, were some of the 36.

173. Benston & Marlin, *Bank Examiners' Evaluation of Credit*, 6 J. MONEY, CREDIT & BANKING 23 (1974). An earlier study, Wu, *Bank Examiner Criticisms, Bank Loan Defaults, and Bank Loan Quality*, 24 J. FINANCE 697 (1967), found some predictability adhering to examinations, though accuracy fluctuated widely among banks. Benston and Marlin note that this accuracy could be a mere reflection of bank management's candor with examiners, if, as seems likely, management can predict as accurately as the examiner. *Id.* at 42. This view would explain the wide fluctuations.

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power” of this sort simply because regulators use them in bank evaluations, but this skirts the issue of whether they have much to do with prediction or prevention of failures.¹⁷⁴

In addition to doubting whether prediction of bank failures from financial statements is accurate enough to warrant balance-sheet shaping rules, one may also raise questions about specific rules such as those pertaining to capital adequacy. Since before the turn of the century, banking regulators have been concerned with the adequacy of a bank’s capital cushion, and over time have measured it in various ways: the ratio of capital to deposits, the ratio of capital to total assets, the ratio of capital to risky assets, an adjusted risk-asset approach that takes account of liquidity factors, and the ineffably refined and inclusive ratio of the Federal Reserve Board. The agencies now differ in their approaches. In any event, it is known that capital ratios have been declining since the early 1800s.¹⁷⁵ This fact may indicate a decline in regulatory effectiveness or it may reflect developments favorable to financial intermediation in general, such as increased efficiency in the securities markets and higher positive covariance among securities yields,¹⁷⁶ the implementation of last-resort lending, deposit insurance, and other governmental back-up schemes.

The consensus of those testing the ratios is that the level of bank capital has not been established as a material factor in determining whether banks survive general banking crises or whether they fail in periods of economic stability.¹⁷⁷ Yet the search for the optimal capital measure continues, apparently in the belief that capital cushions must have something to do with bank soundness.¹⁷⁸ And they probably do, in certain situations. The question is whether these situations are present to a significant degree in the real world. The subject of capital adequacy has recently generated a staggering amount of commentary

174. Compare the variables employed by Meyer & Pifer, *supra* note 160, with those used in the studies cited in notes 170 & 171 *supra*. In most of the latter, but not the former, capital adequacy ratios were used.

175. G. VOJTA, *BANK CAPITAL ADEQUACY* 8 (1973); I FINE STUDY PAPERS, *supra* note 3, at 376 (selected capital ratios for national banks, 1920-1974).

176. See p. 52 *supra*.

177. G. VOJTA, *supra* note 175, at 8-13. The study was a production of First National City Bank and contains a certain amount of pro-bank propaganda. After pointing out the lack of firm evidence for believing that regulator-desired capital levels will significantly promote bank soundness, Vojta does not hesitate to propound new measures of capital adequacy—stressing, as one might expect, the importance of bank earnings—without justifying those measures by reference to relevant empirical studies. *Id.* at 31.

178. A most interesting finding is that bank holding company stock prices are determined, in a statistically significant way, by degree of leverage; investors do think they perceive different degrees of risk in banks with different capital structures. Beighley, Boyd & Jacobs, *Bank Equities and Investor Risk Perceptions*, 6 J. BANK RESEARCH 190 (1975).

by bankers.¹⁷⁹ Some commentators argue that safety is not the real reason for capital adequacy requirements: the agencies are really using capital adequacy as a tool to control bank expansion or, perhaps, the money supply.¹⁸⁰

As a final irony, one study concluded that regulators have been unable to affect the levels of bank capital; that is, current capital levels are generally the same as those that bank shareholders, acting according to a normal profit-maximizing model, would have chosen. Nor have regulators prevented banks from substituting deposit insurance for capital in their decisions to operate at certain risk levels.¹⁸¹

Reserve requirements comprise another group of specific balance-sheet shaping rules of doubtful effectiveness. Almost no one questions that the reserves required of members of the Federal Reserve System are no longer aimed at their original purpose, providing a liquidity buffer. Instead, the requirements are alternative and perhaps unnecessary means of controlling the money supply. One side effect of the

179. *E.g.*, Carey, *Reassessing the Role of Bank Capital*, 6 J. BANK RESEARCH 165 (1975) (earning power vital to capital adequacy; role of capital to provide investment funds for productive assets); Friedman & Formuzis, *Bank Capital: The Deposit-Protection Incentive*, 6 J. BANK RESEARCH 208 (1975) (argument that one of three reasons for bank capital, protection of uninsured depositors in case of bank failure, should be discarded); Gallant, *Approaches to Capital Planning*, 6 J. BANK RESEARCH 173 (1975) (adequate capital is that which maintains confidence of depositors, investors, regulators, *etc.* during periods of stress); Johnson, *Capital Planning*, 58 J. COM. BANK LENDING, July 1976, at 24 (elements of good capital structure policy for bank); Watson, *A Regulatory View of Capital Adequacy*, 6 J. BANK RESEARCH 170 (1975) (earning power key ingredient in determining capital adequacy).

180. Golembe, *Capital Adequacy and Bank Losses*, 57 J. COM. BANK LENDING, Aug. 1975, at 11 ("new" function of capital adequacy is to control bank expansion); McQuown, *Bank Capital: The Fall Guy*, 6 J. BANK RESEARCH 163 (1975) (monetary control theory).

181. Peltzman, *Capital Investment in Commercial Banking and Its Relationship to Portfolio Regulation*, 78 J. POLITICAL ECON. 1, 20 (1970). Peltzman's study has been supported by Mayne, *Supervisory Influence on Bank Capital*, 27 J. FINANCE 637, 639, 650 (1972). To Mayne must go the credit for conducting a survey to which bankers responded that they resist regulation in proportion to the stringency of the regulation. *Id.* at 650. This may be the key datum in the controversy.

From a legal perspective, it is possible to conceive why regulators' efforts to control capital adequacy levels might be ineffective. The federal banking laws do not explicitly give power to any of the agencies to make rules on the subject of capital adequacy that will apply on a continuing basis. The Federal Reserve Board may condition approval of an application under the Bank Holding Company Act on compliance with its capital adequacy guidelines; the FDIC may threaten a cease and desist order on the ground that capital is so low as to be an "unsound or unsafe" banking practice, and so forth. But these responses may be too spotty or extreme for comprehensive use. *Cf.* *Continental Bank & Trust Co. v. Martin*, 303 F.2d 214 (D.C. Cir. 1962) (Board's "novel order" to state member bank to increase capitalization not final and appealable where no provision made for fine, penalty, or sanction).

One study that contradicted Peltzman's results was Mingo, *Regulatory Influence on Bank Capital Investment*, 30 J. FINANCE 1111 (1975). Following Peltzman's methodology and using data for 1970 covering 323 randomly selected banks from the 32 states not permitting statewide branching, Mingo found that regulators have a statistically significant influence on capital investment in banks.

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continuation of the requirements has been an exodus from the Federal Reserve System because the stringent reserve requirements are felt to impinge too greatly on earnings or, in some cases, on the availability of credit to local borrowers.¹⁸²

The results of studies of commercial bank regulation are mirrored by studies in the insurance field. A theme common to all the studies is the present imprecision of regulation, which results from a failure adequately to consider expected cash flows. A widely used method of valuing life insurance reserves¹⁸³—the net-level-premium method—has been found seriously inaccurate because of this deficiency.¹⁸⁴ A side effect is the method's tendency to impose a ceiling on a company's rate of growth,¹⁸⁵ perhaps discriminating against newer companies.

In the property and liability insurance field, legally required or permitted methods of computing reserve liabilities¹⁸⁶ are also recognized as imperfect. Loss reserves tend to be no more than rough estimates;¹⁸⁷ and both loss and unearned premium reserves are legally required to be computed in an unrealistically conservative way.¹⁸⁸

182. The empirical research on this issue is admirably summarized in a nontechnical article by Rose, *Exodus: Why Banks are Leaving the Fed*, 158 BANKERS MAGAZINE, Winter 1975, at 43.

183. On the valuation of life insurance reserves, see note 126 *supra*.

184. Belth, *supra* note 126. Under the net-level-premium method the "reserve at a valuation date is the excess of the present value of the future death benefits . . . over the present value of the future valuation premiums." *Id.* at 98. The valuation premium (or net premium) is selected so that its present value at issue date equals the present value at issue date of the death benefits of a group of policies. Belth argues that the method is too simple—in computing present values it considers only interest and mortality and ignores expenses and lapses—and that it overemphasizes the use of conservative assumptions and methods, rather than employing the best actuarial methodology.

185. *Id.* at 107. The growth limitation results from the combination of regulatory requirements (e.g., minimum surplus amounts) and the tendency of the valuation method to require higher reserves than other methods. Thus, in the first years after issuing a group of policies, the premium inflow exceeds the outflow to beneficiaries. By requiring more reserves than are necessary during that period, the company is deterred from issuing new policies until it can build up sufficient surplus amounts.

186. On the computation of property and liability insurance reserves, see note 126 *supra*.

187. Loss reserves are the amounts set aside for claims that have been incurred but have not been paid. See Clark, *supra* note 1, at 1665 n.219.

188. Reserve liabilities are usually required to be computed on the basis of *gross* premiums, i.e., the premiums charged the policyholder with no deduction for expenses. Reserve liabilities are thus written down at a rate slower than actual expenditures and experience would suggest. An insurer might write \$10,000 in new premiums, disburse \$3,500 in commissions and other costs by the end of the first month (thus reducing its assets by that amount), and yet (at the end of the first month) have to show its reserve liabilities under the new policies to be about \$9,500. The insurer's surplus will therefore be reduced by about \$3,000, even though, if the insurance experience works out as assumed, the surplus position will have returned to normal and even increased to the extent of the profit generated by the new business. The effect of the redundancy in reserve computation is to cause an apparent surplus "drain" on rapidly growing companies.

Some proof of the latter proposition is given by the fact that potential purchasers of a stock casualty insurance company, when figuring how much the company is worth to them, may add a significant amount to the net worth accounts appearing on the financial statements used for regulatory purposes.¹⁸⁹

One ratio-type test used in the property and liability insurance field deserves special mention because of the empirical research done upon it. Under the so-called Kenney rule, which was prompted by Depression-era events,¹⁹⁰ a company restricts what is variously referred to as its operating, insurance, or underwriting leverage (as opposed to its financial leverage¹⁹¹) in accordance with a mechanical "two to one" rule. In any year, up to two dollars of premiums may be written for each dollar of the company's surplus, with surplus defined to include legal capital and the other net worth accounts. The rule thus bears a close kinship to some versions of a capital adequacy test for banks. Recent research shows that, given a regulatory decision that a company may not operate so as to exceed a specified probability of ruin, the maximum permissible operating leverage varies quite significantly, depending on the company's investment mix (proportion of stocks versus bonds) and the method of valuing the company's bonds.¹⁹² Generally, when bonds are valued on an amortized basis, a much higher operating leverage may be permitted a company investing only in bonds, since bond yields so computed exhibit less positive covariance with underwriting profits than stock yields do. But when

See S. HUEBNER *et al.*, *supra* note 21, at 580-81; C. KULP & J. HALL, *supra* note 21, at 762-63, 999-1004. Kulp and Hall contend, however, that the inaccuracy is not a serious fault, since the inaccuracy is in the direction of safety. *Id.* at 1004.

Even without deliberate conservatism, insurance company financial statement data may be only tenuously relevant indicators of financial strength. See pp. 67-73 *supra*.

189. One is reminded of the man who, in order not to be late for appointments, keeps his watch set 20 minutes ahead of time, and then engages in endlessly repeated calculations to figure out what the real time is. For an illustration of the valuation of insurance companies see C. KULP & J. HALL, *supra* note 21, at 763; *cf.* Belth, *supra* note 126, at 118 (similar practice in valuing life insurers).

190. See R. KENNEY, *FUNDAMENTALS OF FIRE AND CASUALTY INSURANCE STRENGTH* 206-12 (1949).

191. Financial leverage might be expressed by the ratio of the insurer's reserve liabilities, or some important part of them (*e.g.*, loss reserves for casualty companies), to the company's surplus (net worth). This expression generally corresponds to the familiar debt/equity ratio used in general discussions of corporate finance. Leverage might also be expressed by the "policyholders' surplus ratio," the number of dollars of surplus or net assets per dollar of insurance obligations. Some consider this to be the single best measure of insurer strength. A policyholders' surplus ratio for casualty companies might average \$0.82 for stock companies and \$0.49 for mutual companies (which may have a more stable surplus). See C. KULP & J. HALL, *supra* note 21, at 761-62.

192. Bachman, *Premium-to-Surplus Ratios, Investment Portfolio Composition and Insurer Solvency*, 75 *BEST'S REV.*, April 1975, at 10 (property/liability ins. ed.).

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fair market values of bonds are used, the maximum permitted operating leverage goes to the companies with a more evenly balanced mix of investments. Since the question of the relevant method of bond valuation depends heavily on a company's liquidity needs¹⁹³ and the purposes of valuation, it is unlikely that an unarguable answer to the question will ever be given.¹⁹⁴ In any event, this research shows the crudity and potential irrationality of the Kenney rule. Subsequent research has extended the point: the maximum permissible operating leverage also depends on the proportion of property versus liability insurance that the company writes.¹⁹⁵

It seems clear, then, that portfolio regulation is crude and imprecise when it goes beyond identifying and responding to imminent failure and tries instead to predict failure in the intermediate-term future, building asset restraints and balance-sheet shaping rules on the basis of theories of such prediction—all in the name of ensuring soundness. The continued existence of balance-sheet shaping rules in the absence of solid evidence that they work very well stems in part from a failure to understand why they might not work. Accordingly, in order to put in context the available empirical evidence and to appreciate the need for more, it is helpful to go beyond the rules to a rudimentary consideration of financial failure, balance-sheet presentations of a company's condition, and the reasons why useful predictions of the former from the latter might not be possible.

b. *Balance Sheets and Financial Failure*

i. *Four Kinds of Insolvency and Their Lack of Necessary Relationships*

A conservative approach to the regulation of financial intermediaries would equate soundness with freedom from insolvency or the danger of becoming insolvent. Yet the concept of insolvency is deeply ambiguous. Particular specifications of it may yield indicators of financial condition of very different relevance and value to the fundamental goals of risk regulation.

193. See p. 57 *supra*.

194. It is possible to have a mixed system, of course, under which a proportion of portfolio bonds, those with an $X\%$ probability of having to be liquidated before maturity or during time period Y , would have to be carried at market, while the others could be carried on an amortized basis. Such a system would be based on liquidity projections and on a somewhat arbitrary choice of cutoff points. Although inelegant, that system might be better than existing ones.

195. Bachman & Lang, *Investment Portfolio Composition, Product Line Mix, and Their Impact Upon Operating Leverage and Solvency*, 76 *BEST's REV.*, April 1976, at 20 (property/liability ins. ed.).

It is helpful to distinguish four important notions of insolvency. "Bottom line insolvency," which can be paraphrased as unavoidable and massive contractual failure, occurs when a firm is generally unable to pay its debts as they become due. "Unable to pay" means that the firm cannot pay its due and payable debts without governmental intervention of the sort provided by the FDIC, even though the firm tries its best to obtain refinancing or to liquidate its assets at the best immediately available price.¹⁹⁶ "Traditional equity sense insolvency" also occurs when a firm is generally unable to pay its debts as they become due. But here, inability to pay means that the firm cannot meet its due and payable obligations without engaging in a liquidation of assets at distress prices or jeopardizing the debtor's ability to meet future maturing obligations. "Accounting insolvency" occurs when a firm's balance sheet, prepared in accordance with generally accepted accounting principles, shows an excess of liabilities over assets (a negative net worth). Accountants value many kinds of assets at their historical costs, less depreciation. "Bankruptcy Act insolvency" occurs when a firm's liabilities exceed its assets, where the assets (but not the liabilities) are valued at their fair market or intrinsic value.¹⁹⁷ The first two concepts pertain to short-term capacity to meet imminently due obligations; the latter two are "balance sheet" notions that try to take account of all or nearly all liabilities and the firm's long-term ability to meet them.

Ultimately, I assert, all risk-regarding regulation of the soundness of financial intermediaries is directed toward preventing or coping with bottom line insolvency. To put the point another way, if reactive regulation were ruled out as a strategy, one could say that the objectives of regulation would be defeated only if claims are not paid when due—thus invoking the specter that either public suppliers of capital will be injured or that the government will have to intervene to meet the intermediary's obligations. Because the law aims at *preventing* contractual failure, regulatory tests of insolvency, or related, propae-

196. "Immediately available" is intended to be taken literally: a price that can be realized in usable form before the first instant when the debts to be satisfied out of the proceeds are, or otherwise would be, in default, by virtue of a contractual definition of default or general legal principles. If the cashless institution waits until an obligation has become due and payable, and if payment has been demanded before the institution decides to sell an asset, the "best immediately available price" at which the asset can be liquidated is, under this usage, zero.

197. A person shall be deemed insolvent within the provisions of this title whenever the aggregate of his property, exclusive of any property which he may have conveyed, transferred, concealed, removed, or permitted to be concealed or removed, with intent to defraud, hinder, or delay his creditors, shall not at a fair valuation be sufficient in amount to pay his debts.
Bankruptcy Act § 1(19), 11 U.S.C. § 1(19) (1970).

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deutic concepts such as minimum net worth and capital adequacy, are tests of insolvency or unsoundness in a more remote and abstract sense than bottom line insolvency. The relevant question then becomes whether there is a significant correlation between these remote tests and freedom from future bottom line insolvency.

As an a priori matter, the relationships among the four concepts of insolvency are largely indeterminate; there are few logically or analytically necessary relationships among them. Since bottom line insolvency is the touchstone of policy, five negative propositions about indications (and, a fortiori, predictions) of its presence should be expressly noted. First, as is clear from the definitions, traditional equity sense insolvency does not imply bottom line insolvency.¹⁹⁸ Second, accounting insolvency does not imply bottom line insolvency.¹⁹⁹ Third—a point

198. Historically, it was correctly perceived that traditional equity sense insolvency did not even imply either kind of balance sheet insolvency. That is why Congress, to protect debtors from the stigma and improvident liquidations of bankruptcy, generally restricted involuntary bankruptcy to debtors insolvent in the Bankruptcy Act sense. Six acts of bankruptcy are listed in 11 U.S.C. § 21a (1970). Of those six, two, the suffering of certain judicial liens or of a receivership, refer explicitly to the debtor's insolvency. Two others, making fraudulent or preferential transfers, indirectly implicate tests of insolvency. The last two, making a general assignment for the benefit of creditors and a written admission of inability to pay debts and of willingness to be adjudged bankrupt, should be expected to occur only rarely absent insolvency. See Bonbright & Pickett, *Valuation to Determine Solvency Under the Bankruptcy Act*, 29 COLUM. L. REV. 582, 583-84, 587-88 (1929).

199. For example, consider a corporation with the following conventional balance sheet:

<i>Assets</i>		<i>Liabilities</i>	
Cash	\$100	Current Liabilities	\$100
Receivables	100	Funded Debt	300
Fixed Asset	100	Net Worth	(100)

The fixed asset is a machine that produces the tangible goods sold by the company; on this balance sheet the machine is valued at historical cost less accumulated depreciation. The cash is kept in a non-interest-bearing checking account to serve as a buffer in case emergency expenditures must be made. Assume that the receivables will be collected before the current liabilities, which are non-interest-bearing, become due within the coming year. Even though the company is insolvent in a balance sheet sense, it may be in perfectly sound financial condition. Suppose, for example, that the fixed asset has a fair market value (FMV) of \$600 at current capitalization rates. Specifically, it nets \$60 in excess of expenses and amounts set aside for its replacement at the end of its 20-year useful life. The entire principal amount of the funded debt, however, is payable in one sum 20 years from the date of the balance sheet and bears interest of 8%, payable annually. Since income from the receivables covers the current liabilities, and since the \$60 yielded by the fixed asset will more than cover the \$24 annual debt service, the company's profit will be \$36 per year. Therefore, if these basic facts and all relevant external conditions remain constant, the company should experience no difficulty in refinancing its funded debt at the end of the 20-year period. If the company were averse to the risk of being unable to refinance at the later time, it might set aside the yearly profit in a sinking fund or use it to expand operations. If the annual return on the use of the profits should prove to be 10%, for example, the company would have a fund, or assets with a fair market value, worth about \$2,000—more than enough to repay the principal amount of the funded debt.

for those who think the problem is only with the accountant's failure to use fair market values of assets—Bankruptcy Act insolvency does not imply bottom line insolvency.²⁰⁰ Fourth—a point for those who think that fair valuation of assets *and* liabilities would surely provide accurate predictions—a balance-sheet test of insolvency based on a statement which listed assets at fair market values and liabilities, not at their face values, but at their discounted negative present values (as is done for life insurance and pension fund liabilities), would not imply bottom line insolvency.²⁰¹ Fifth—a point for those untroubled by regulatory overkill, so long as failures are prevented—solvency in neither the accounting nor the Bankruptcy Act sense implies that the firm will not soon fall into bottom line insolvency. A fortiori, more remote tests of soundness which build on balance sheet solvency—such as net worth, surplus, and capital adequacy requirements—do not imply freedom from future bottom line insolvency.

The fifth result bears special comment because it may not be as obvious as the others. Consider, for example, a company solvent in the Bankruptcy Act sense that failed, because of a liquidity squeeze, to pay its debts as they became due. If the creditors became intransigent and resorted immediately to their legal remedies, such as execution, to enforce their debts, one might think the creditors would be satisfied in full, albeit involuntarily. This need not occur, however, because execution sales, for a variety of institutional reasons such as thin markets and inherent uncertainty about the legal rights acquired by execution purchasers, often bring the creditor far less than the fair market value of the property sold.²⁰² Thus, creditors faced with a

200. Suppose that the corporation analyzed in the preceding footnote had a somewhat different balance sheet:

<i>Assets</i>		<i>Liabilities</i>	
Cash	\$100	Current Liabilities	\$100
Receivables	100	Funded Debt	800
Fixed Asset (at FMV)	600	Net Worth	(100)

As before, assume that the fixed asset generates net annual earnings of \$60. If the company were fortunate enough to be paying only 5% per annum on its 20-year funded debt of \$800, the company could meet its interest payments and have an annual profit of \$20. In essence, its position would be similar to that of the corporation under the first set of assumptions. Even if the company were paying 7% interest per year on the funded debt (thereby reducing its annual profit to \$4) it might, by prudent management of its earnings and a bit of luck, put itself into a position to obtain comparable refinancing at the end of 20 years.

201. A firm insolvent on a balance sheet using fair valuation, but able to meet its legally required cash outflows in the near future, may not suffer bottom line insolvency. One reason is that before obligations become due the fair values of assets and obligations may change favorably in response to a variety of external or internal events, ranging from unexpected changes in the rate of inflation to technological advances.

202. See D. EPSTEIN, *DEBTOR-CREDITOR RELATIONS* 50-51 (1973); R. NEEDHAM & L. POLLACK, *COLLECTING CLAIMS AND ENFORCING JUDGMENTS* 194 (1969).

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corporation solvent in the Bankruptcy Act sense and yet not paying its due and payable debts may in fact never be satisfied; real and ultimate contractual failure may result if normal creditors' remedies are invoked. The rehabilitation chapters of the Bankruptcy Act²⁰³ are designed to deal with situations of this kind, and to salvage some of the excess of fair market or going concern values over liquidation values, for the benefit of creditors (and perhaps, in certain cases, debtors).²⁰⁴ Yet these provisions are not always available;²⁰⁵ nor do they always work as intended.²⁰⁶

ii. *Reasons for Lack of Necessary Relationships*

Isolated examples showing that the more remote concepts of insolvency or absence of adequate net worth need not indicate or predict bottom line insolvency are likely to leave one unimpressed; the examples may be mere anomalies. It is in order, therefore, to contemplate the more obvious factors that can compromise the utility of financial statements for indicating or predicting failures. The factors may be grouped into three categories: assets, liabilities, and nonfinancial factors. As will be seen, the interrelationships of items on the balance sheet can be crucially important.

Assets: The balance sheet may not show the fair market value of an asset. Even the fair market value may be relevant only if the asset will in fact be sold on a market to meet the company's obligations when they become payable. Otherwise, fair market value is relevant only as a proxy for projected earnings from the asset.²⁰⁷ Thus, when

203. Bankruptcy Act § 77, 11 U.S.C. § 205 (1970) (railroad reorganizations); *id.* ch. X, 11 U.S.C. §§ 501-676 (1970) (corporate reorganizations); *id.* ch. XI, 11 U.S.C. §§ 701-799 (1970) (arrangements).

204. In Chapter XI arrangements of corporations, the stockholders often salvage significant value for themselves. In Chapter X reorganizations this result is less common because of the so-called absolute priority rule. See Blum & Kaplan, *The Absolute Priority Doctrine in Corporate Reorganizations*, 41 U. CHI. L. REV. 651 (1974).

205. Insurance and banking corporations, for example, are excluded from the benefits of the Bankruptcy Act. 11 U.S.C. § 22(a), (b) (1970).

206. See, e.g., B. GRAHAM, *THE INTELLIGENT INVESTOR* 195-96 (1949), quoted in W. BLUM & S. KAPLAN, *CORPORATE READJUSTMENTS AND REORGANIZATIONS* 485-86 (1976) (discussing stalling tactics by stockholders in Cotton Belt Railroad reorganization).

207. For example, consider a life insurance company with a fixed obligation to pay the beneficiaries of its policies \$1 million annually for the next 10 years. To cover these obligations the company has purchased marketable bonds whose maturities will provide the intermediary with \$1.1 million each year shortly before payments are due to be made to the beneficiaries. The chief risks in assessing whether the company will become insolvent in the bottom line sense are the risk that the obligors will default (default risk) and the risk that the management or the employees will steal the company's bond income (infidelity risk), rather than the risk that the bonds will drop in value because of a sharp rise in the general level of interest rates (market risk). If interest rates shifted, the market value of the bonds might decline below the estimated present value of the company's obligations. Unless the decline was also attributable to a belief that the bonds would not

assets are not expected to be sold before the end of their lives, the relevant data from the standpoint of assessing prospects for contractual failure include their rates of return, their lifespans, and the benefits, such as salvage values or principal payments, received at the end of their useful lives. Whether assets will not be expected to be sold before the end of their lives will in turn depend on predictions about the maturity dates of the company's obligations and on a variety of aspects of the company's strategy for maximizing profits.²⁰⁸

Furthermore, when it is expected that an asset will be sold or otherwise disposed of to meet a company's obligations, the relevant fair market value for purposes of predicting bottom line insolvency is that which obtains at the time of the future sale, which will be some reasonable time before the maturity of the obligations in question. These relevant fair market values may be hard to predict. In addition, financial intermediaries may not be able to fix in advance the dates on which obligations must be met. The dates may therefore have to be predicted by actuarial techniques or, sometimes, by guesswork.

Other factors that impair the predictive utility of assets shown on balance sheets include the possibility that those assets may be sold and converted into other assets before obligations become payable. The new assets may have a different pattern of earnings and of future changes in salable values. Finally, a variety of uses may be made of any positive cash flow generated by a business, though balance sheets will hardly indicate the various alternatives and their probabilities of occurrence. A company might distribute the funds to shareholders, reinvest them in similar business ventures, invest them in money market instruments, and so forth.

Liabilities: A balance sheet per se may exclude some liabilities, for example, contingent ones, that a rational businessman or regulator should consider. A group of acknowledged obligations may be contingent, either as to liability (*e.g.*, a pending antitrust action against the company) or as to due date (*e.g.*, the obligations to pay up on life insurance contracts or to meet requests for withdrawal of demand deposits). A balance sheet may not provide a good prediction of the seriousness of the contingency or, put otherwise, a best estimate of the contingency together with a measure of the probability of various specific deviations from that estimate. Furthermore, the balance sheet may not indicate the interest payable on the obligations. The interest

be paid, the lower market value would be irrelevant to an assessment of the company's soundness. As long as the inflow of funds from the bonds equalled or exceeded the obligatory outflow of funds, the company would be solvent.

208. See pp. 55-57 & n.207 *supra*.

itself may be contingent and varying;²⁰⁹ if so, the balance sheet's lack of a useful prediction as to probable interest obligations may be serious.

Finally, just as management may replace its stock or portfolio of assets and have better luck with the new block, it may change the nature and extent of its liabilities before an apparent future day of reckoning arrives. Rather than relying upon its earnings or sales of assets, a bank might decide to meet future obligations by resorting to borrowing—for example, in the federal funds market, from a Federal Reserve Bank, or by issuing negotiable certificates of deposit or commercial paper from its bank holding company. Needless to say, this delicately tinted and complex horizon of borrowing strategies is nowhere painted on the bank's balance sheet. Yet one cannot assess the bank's soundness without considering its ability to take advantage of these alternative strategies. The extent and validity of the bank's reliance on "liability management" is left to the unsystematized experience and judgment of management and regulators—or perhaps only to their hunches and biases.

Nonfinancial Factors: Even specially and carefully prepared balance sheets, such as those toward which the SEC has moved,²¹⁰ may not reflect all information that is relevant in evaluating the soundness of a company. Management's health, integrity, competence, and image may all be crucially relevant to the fortunes of an enterprise, as may be such factors as future developments in technology, the competitive setting of the business, and economic trends. In a sophisticated projection of future earnings, complete with estimates of the riskiness of the earnings, all of these factors should be considered, though material facts often will be overlooked or misinterpreted.

It should be apparent, then, that the value of regulation aimed at ensuring financial soundness or detecting unsoundness will depend on the accuracy and tractability of the data obtained by the regulators, the nature of the tests and constraints, and the extent to which these tests and constraints reflect the more important of numerous and complex relevant variables. The proper portrayal of assets and liabilities, or proper projection of cash inflows and outflows, for purposes of predicting bottom line insolvency, can be extremely difficult. The diffi-

209. Some bank holding companies have issued floating-rate notes. See, e.g., N.Y. Times, July 25, 1974, at 43, col. 1. A related point is that many short-term liabilities indicated on the balance sheet, e.g., borrowings in the federal funds market and negotiable certificates of deposit, may soon be rolled over in the normal course, but at a different interest rate.

210. See 17 C.F.R. pt. 210 (1976); Wall St. J., Sept. 23, 1976, at 1, col. 6 (discussing reactions to SEC accounting rule requiring balance sheets to show effect of inflation on replacement costs).

culties place a great handicap on simplified balance-sheet-type tests of solvency, traditional techniques of financial analysis, and mechanical rules concerning financial ratios derived from financial statements.

iii. *From Balance Sheet to Model of Flows*

The manifold, and practically elusive, factors that have been introduced to impart a sense of the complexity and extent of the problem of soundness should be related to a simpler and more fundamental description of the problem. In view of the diversity of factors, it is easy to lose sight of the elements of the problem and to confuse what is directly relevant to preventing bottom line insolvency with what is indirectly relevant.

At its most elementary level, the problem of soundness involves money and cash flows, not assets and unmatured obligations. Ignoring flows of funds for expenditures not peculiar to financial intermediaries (*e.g.*, rental and salary payments), the principal flows of money with which the intermediary is concerned are, quite simply, the inflows, both from investment assets and capital suppliers, and the outflows, both for investment assets and to holders of the intermediary's obligations and common stock. From an insolvency prevention standpoint, the crucial characteristics of each of the cash flows are (1) the expected amounts and (2) the expected times of future flows, together with (3) the pattern of estimated probabilities of dispersion of actual flows around the expected flows. Within this framework many common distinctions and simple classifications of balance-sheet data appear relevant only insofar as they illuminate and suggest what the values of the three primary characteristics are.²¹¹

In terms of flows, the objective of the intermediary is to maximize one type of flow, payments to equity owners, in relation to another, payments by equity owners. This objective is always subject to the constraint that the amount of cash in the intermediary may never be insufficient to meet legal demands made on it. That is, cash on hand must equal the amount of obligations legally due and payable at that

211. Included among such distinctions are the difference between obligations or assets that are fixed in amount (*e.g.*, bank deposits or bonds) and those not so fixed (*e.g.*, casualty insurance policies or common stock); between relatively continuous flows from interest or dividend payments on assets or obligations (*e.g.*, interest revenues from portfolio bonds and dividend payments to policyholders) and lumpy flows from principal payments and capital gain receipts (*e.g.*, payment of requests for withdrawals of deposits and receipts of gains on the sale of portfolio stock); and between fixed maturities of assets and obligations (*e.g.*, the maturities of short-term notes and capital debentures) and unfixed maturities of assets and obligations (*e.g.*, the maturities of callable bonds and life insurance contracts).

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same instant. The regulator's job is—or ought to be—to ensure that the probability that the constraint will not be satisfied is kept below some specified level, without unnecessarily impairing management's abilities to maximize the flow to equity owners.

This model of the problem is, of course, both simple and abstract. To employ the approach would require greater specification of elements, sophisticated mathematical techniques, computer time, and a great deal of information, much of which would have to be estimated. A complicated legal rule based on balance sheet ratios might still be practically more feasible than a comprehensive analysis of fund flows. Reports of detailed financial information could be required, and a capital adequacy ratio could be defined in a way that varies in a complex manner with the characteristics of particular subclasses of assets and obligations—such as is done by the Federal Reserve Board's capital adequacy formula.²¹² It should be theoretically possible to take into account many factors typically ignored by balance sheets but required by a comprehensive flow model. Nevertheless, the flow model should serve as a heuristic guide to regulators seeking to study better modes of predicting contractual failure from information that intermediaries are reporting or could be required to report. Approaches similar to the model are already used by sophisticated intermediaries attempting to sharpen their policies for meeting liquidity needs and to improve their profit-maximizing strategies.²¹³

Moreover, the model is a simple reference source for generating criticisms of particular ratio tests and incomplete “theories” of liquidity or solvency. Using a simple ratio of loans to deposits as a measure of a commercial bank's degree of illiquidity, for example, might be faulted for ignoring the maturities and repayment schedules of loans, the expected pattern of future loan demand, the expected likelihood and extent of deposit fluctuations, and the degrees of liquidity of assets other than loans.²¹⁴ Similarly, the distinction among four common

212. See *Problem Banks: Hearing Before the Senate Comm. on Banking, Housing and Urban Affairs*, 94th Cong., 2d Sess. 142-44, 146-47 (1976) (Federal Reserve Board memorandum discussing capital adequacy and Board's form for analyzing bank capital).

213. See E. REED, R. COTTER, E. GILL & R. SMITH, *COMMERCIAL BANKING* 111-17 (1976).

214. *Id.* at 119-20. Whereas the loans/deposit ratio is intended as a measure of illiquidity, the Comptroller of the Currency's Bank Liquidity Analysis form uses a purported measure of liquidity (net liquid assets to net liabilities) that is subject to the same criticisms. The Comptroller freely admits that such mechanical analyses are inadequate and that maintenance of adequate liquidity depends on many factors which differ among individual banks. He concludes that the best regulation is both flexible and informed (*i.e.*, that assessment of liquidity should be left to the regulators' discretion and not confined or disciplined by statute or rulemaking). See *I FINE STUDY PAPERS*, *supra* note 3, at 314-15 (statement of Comptroller of Currency). Whether the unsystematized and nonscientific practical judgment of bank examiners is consistently better than that of bank management is, of course, open to question.

“theories” of a bank’s liquidity management—the commercial loan theory, the shiftability theory, the anticipated-income theory, and the liability-management theory²¹⁵—readily can be perceived as a difference in emphasis upon relevant factors. Liquidity needs obviously can be satisfied by any dollars, whether they come from loan repayments, receipts from the sale of short-term securities, new deposits, or newly borrowed funds. The true task is to find the combination of sources that is cheapest.

It is hoped that this lengthy discussion will have indicated the sterility of pure reason in generating or evaluating useful balance-sheet shaping rules. It is not enough to test such a rule against a standard of plausibility or seemingly inevitable relevance. Systematic empirical study must be employed to test such rules. Since the empirical studies create serious doubts about the effectiveness of much existing portfolio regulation, newly devised but unproven rules and guidelines should be treated with appropriate skepticism.

3. Summary

Balance-sheet shaping rules, which comprise one major class of techniques of portfolio regulation, are of doubtful efficacy in their current form. To make them effective in the future will probably require substantial advances in theory and empirical research. Restraints on kinds of assets, which comprise another class, can be effective in reducing institutional riskiness; but to the extent that they are effective they are likely to be based on archaic conceptions of risk and unduly restrictive. Future developments in portfolio theory which take account of differences in the obligational context faced by the different types

215. Under the commercial loan theory, which prevailed throughout the olden days of American banking, banks are supposed to keep their loan maturities short, so that principal repayments can be used to meet deposit withdrawals and new loan demands. The theory was criticized for ignoring the de facto partial stability of deposits. See E. REED, *et al.*, *supra* note 213, at 125-27.

Under the shiftability theory, a bank’s liquidity is to be maintained by its keeping liquid assets—short-term securities not subject to much market risk—that can be shifted or sold for cash as the need arises. The idea has validity, though it did not help banks in the 1920s and 1930s, when they relied for liquidity on call loans collateralized by stock: when stock prices fell, the liquid assets evaporated. Today, government securities are used, and regulators are probably less cautious about banks that employ this theory than they are about those leaning heavily upon liability management techniques. See *id.* at 127.

The idea of the anticipated-income theory is to relate scheduled loan repayments to the borrower’s income. The liability-management theory is simple enough in concept: a bank should rely on borrowing—via certificates of deposit, federal funds, Eurodollars, and the like—to meet liquidity needs. The strategy was much in vogue in the 1960s and early 1970s, but suffered something of a setback in the recession of 1974-1975. See *id.* at 127-28.

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of financial intermediaries (or better, by particular financial intermediaries) may mitigate these unfortunate aspects of the strategy, but the success or timing of these developments cannot be firmly predicted. Portfolio regulation has tended to generate very high direct enforcement costs, though perhaps this characteristic does not necessarily inhere in the strategy. On the other hand, portfolio regulation does not appear to generate indirect costs or secondary formulation costs to the same extent as anticompetitive regulation. On balance, when the two strategies so far considered are viewed as functional substitutes for one another, portfolio regulation appears to be less harmful. It may even be, or with future research and improvement in legal machinery become, justifiable.

C. *Insider Misconduct Regulation*

Studies of the failures of certain financial intermediaries indicate that insider misconduct has played an enormous role in causing the financial downfall of these institutions.²¹⁶ Even after discounting the reliability of the data or indications, one is still left with a picture that contrasts with the various studies of bankruptcies of ordinary, nonfinancial corporations.²¹⁷ The causes of this apparent contrast have never been adequately explored.

It is perhaps not an overgeneralization to say that the substantive rules pertaining to self-dealing and conflicts of interests are stricter in the case of many financial intermediaries than in the case of ordinary nonfinancial corporations. For example, the Investment Company Act of 1940 is essentially a stringent set of federal rules designed to prevent investment company managers, advisors, underwriters, broker-dealers who sell investment company shares, and other affiliated persons from taking advantage of investment company shareholders.²¹⁸ Yet the generalization about the strictness of insider misconduct regu-

216. See pp. 12-14 *supra*.

217. See note 48 *supra*. Questions can readily be raised. Were the data collected in a fatally unsystematic, nonuniform way? Can causal roles be meaningfully assigned to factors present before insolvencies? Are regulators more motivated than trustees in bankruptcy to find dishonesty, since failure for other reasons seems to suggest the ineffectiveness of their regulatory efforts? Does the higher rate of failures due to misconduct among financial intermediaries as opposed to ordinary business corporations simply reflect the fact that, because of anticompetitive and portfolio regulation, few intermediaries can fail for other reasons? Are the studies of failures poor indicators of the incidence of insiders' misconduct in ongoing intermediaries? I hope to show in a forthcoming study, see note 242 *infra*, that a generally negative answer is justified for most of these questions.

218. There are some provisions in the Act, however, which do reflect the strategies of anticompetitive regulation and portfolio regulation, see, e.g., 15 U.S.C. §§ 80a-13, -18 (1970 & Supp. IV 1974), but they are less extensive and less intrusive than the techniques applied to depository-type and insurance-type financial intermediaries.

lation cannot be made absolute. In particular, many conflicts of interest in the savings and loan industry, though pervasive, were long tolerated for peculiar historical reasons.²¹⁹ Even here, though, recent insider transaction regulations of the Federal Home Loan Bank Board²²⁰ herald a stricter regime.

Although regulation of insider misconduct in the case of financial intermediaries generally may be stricter than that for ordinary corporations, it is nevertheless true that the actual regulations applicable to the different types of financial intermediaries differ greatly in their stringency. One may take as an example a perennially important kind of insider misconduct, the abuse of power to the detriment of an intermediary in transactions in which one of its directors has a personal interest. Possible legal responses to such misconduct may be considered in order of roughly increasing severity. First is the Delaware rule for business corporations, which, initially seems to require disclosure of the conflict of interest in addition to approval by directors or ratification by shareholders. Alternatively, however, the Delaware rule permits the interested transaction if it is "fair"—a determination that may only be made through litigation.²²¹ Second is a rule requiring that disinterested directors be informed of the conflict of interest, make an explicit finding that the proposed transaction is fair, and keep records of the finding available for inspection by regulators. The Federal Deposit Insurance Corporation's recent regulations concerning insider transactions in insured nonmember banks are of this sort.²²² A third kind of rule prohibits interested transactions, but provides a procedure for obtaining regulatory approval of particular transactions. Section 17 of the Investment Company Act of 1940 provides a simple example.²²³ A more elaborate complex of rules is given by ERISA, which imposes a general duty of loyalty on pension fund fiduciaries, prohibits many kinds of transactions with interested parties, lists specific exceptions to the prohibitions, and provides a procedure

219. For a superb study, see Herman, *Conflicts of Interest in the Savings and Loan Industry*, in II STUDY OF THE SAVINGS AND LOAN INDUSTRY 763 (I. Friend ed. 1969).

220. 41 Fed. Reg. 35811 (1976).

221. See DEL. CODE ANN. tit. 8, § 144 (Michie 1975).

222. 41 Fed. Reg. 18405 (1976) (to be codified at 12 C.F.R. § 337.3).

223. 15 U.S.C. § 80a-17(a), (b) (1970). The administrative burdens of the approval procedure have been suggested as a reason for change to a three-tier system: de minimis exceptions from approval requirements; no application procedure for transactions that the disinterested directors are willing to find fair and reasonable; and traditional application procedure before the SEC for transactions falling within a zone of reasonableness, but as to which the disinterested directors are unwilling to make a finding. Rosenblatt & Lybecker, *Some Thoughts on the Federal Securities Laws Regulating External Investment Management Arrangements and the ALI Federal Securities Code Project*, 124 U. PA. L. REV. 587, 640-43 (1976).

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for regulatory permission in special cases.²²⁴ A fourth kind of rule proscribes dealings between the institution and its directors or entities in which they are interested, while allowing some exceptions which are usually trivial from an economic standpoint—for example, permission for the institution to make an ordinary home mortgage loan to a director. Some life insurance company statutes exhibit this kind of rule.²²⁵ A fifth kind of rule simply prohibits all transactions in which directors have an interest, without any exceptions or procedures for approval. Some statutes also have rules which attack the problem of insider self-dealing from a structural rather than a transactional perspective. An example is the rule that the board of directors of an investment company must include a certain percentage of outside directors.²²⁶

Because of the variety of regulatory patterns and the rather fundamental differences among them, evaluation of insider misconduct regulation as a strategy for encouraging the soundness of financial intermediaries is more difficult and uncertain than evaluation of the anticompetitive and portfolio-manipulating strategies. As the ensuing discussion indicates, assessment of insider misconduct regulation is uncertain for other reasons as well.

1. Costs

Primary formulation costs are apt to be low because, as with anti-competitive regulation, little thought has been devoted to devising insider misconduct rules. The secondary formulation costs of insider misconduct regulation—such as those associated with development of the Financial Institutions Supervisory Act of 1966²²⁷ and the recent bill²²⁸ expanding the powers granted by that Act—seem to be moderate, and perhaps lower than those generated by the anticompetitive strategy. Insider misconduct rules are certainly subject to clever circumvention.²²⁹ In response, regulators may propose either general rules to

224. ERISA §§ 403, 406-08, 29 U.S.C. §§ 1103, 1106-08 (Supp. IV 1974).

225. *E.g.*, N.Y. INS. LAW § 78(6)-(8) (McKinney 1966 & Supp. 1975-76) (prohibition against loans to directors or officers; general exception for policy loans).

226. 15 U.S.C. § 80a-10(a) (1970) (no more than 60% of directors may be “interested persons”).

227. Pub. L. No. 89-695, 80 Stat. 1028 (1966) (codified at 12 U.S.C. §§ 1464(d), 1724, 1728, 1730, 1813, 1817-21 (1970)).

228. S. 2304, 94th Cong., 1st Sess. (1975).

229. If, for example, a bank is prohibited from making loans to its principal officers, or loans on preferential terms, the officer of Bank *A* may approach Bank *B* and request a loan either for himself or his nonbanking business. The loan may be granted on preferential terms because of some incentive granted to Bank *B*, such as a promise by the officer to cause Bank *A* to place corresponding balances with Bank *B*. The example is not made of whole cloth. It was recently held that an indictment for the use of an

cover all possible misconduct or specific new rules to combat each act of misconduct. Nevertheless, it seems that the spirit or underlying purpose of insider misconduct rules is easier for judges to ascertain and accept wholeheartedly than is that of anticompetitive rules, and, therefore, somewhat easier to extend to novel shenanigans.

As for direct enforcement costs, some speculations may be ventured. As an a priori judgment about human nature, the temptation for a manager to extract a secret personal gain seems harder to squelch by legal admonition than the tendency to operate at an excessive risk level for the benefit of the shareholders as a group. If so, compliance with even the literal terms of a substantive rule governing insider conduct will fall short of the level of compliance with clear-cut legal rules of the anticompetitive and portfolio-manipulating strategies. Accordingly, the enforcement aspect of insider misconduct regulation will become comparatively hypertrophied and costly. In addition to the costs of examinations and reports that are allocable to insider misconduct regulation, there will be the costs of letters of reprimand, hearings, cease and desist orders, extended criminal prosecutions, and, in some areas, private litigation. Thus, direct enforcement costs of insider misconduct regulation may currently be rather low in comparison with those generated by portfolio regulation, but high in relation to the number of cases handled. An enforcement effort adequate to cause a sizable reduction in the incidence of misconduct might also significantly increase the aggregate direct enforcement costs. It seems impossible to prove these conjectures empirically, but some rough data about the size of enforcement efforts seems consistent with the supposition that existing enforcement levels (and costs) are low.²³⁰

interbank deposit as a compensating balance for a loan at preferential rates to an official of the depositing bank alleges a (criminal) violation of 18 U.S.C. § 656 (1970) (misapplication of bank funds). *United States v. Mann*, 517 F.2d 259 (5th Cir. 1975), *cert. denied*, 423 U.S. 1087 (1976); *United States v. Brookshire*, 514 F.2d 786 (10th Cir. 1975). In affirming conviction in the latter case the court said, "If, as the defendant says, this practice is the usual way in which bankers do business, those who engage in it must suffer the penalty which the law constitutionally provides." *Id.* at 790.

230. The FDIC's experience perhaps typifies the patterns of enforcement costs incurred by the government. Since a meaningful breakdown of dollar figures is unavailable, I focus on numbers of actions taken within the FDIC's Division of Supervision. In 1974 the FDIC conducted over 7,400 examinations of main offices and approximately the same number of examinations of departments and branches of nonmember insured banks. It made 304 investigations in connection with applications for insurance; 1,013 in connection with applications for consent to new branches; and 212 in connection with applications for consent to consolidate, merge, purchase assets, or assume liabilities. [1974] FDIC ANN. REP. 10. Although most of the expense of these efforts must be allocated to portfolio regulation and anticompetitive regulation, some should be allocated to insider misconduct regulation.

By contrast, there were few FDIC actions in proceedings more likely to involve insider misconduct. It initiated five new cease and desist proceedings and terminated nine of

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Use of insider misconduct regulation to further ulterior ends has not surfaced as a significant problem. Although the other types of indirect costs caused by such regulation generally appear not to be high, there are exceptions. Some exceptions are presented by rules with such a wide sweep and flatly prohibitive approach that ordinary and reasonable combinations of business functions become impossible. If this effect were serious, it would tend toward both misallocation of resources and discrimination against those affected by the rules who would deal honestly and fairly with affiliated intermediaries even in the absence of regulation. ERISA has been accused of creating this kind of problem, though solutions to its dilemmas have been and will be provided.²³¹

Possibly more important is the argument that there should not be prohibitions against loans by a commercial bank to its directors. This argument suggests that an exception be made in the many places where there is only one bank and all the businessmen who could conceivably be borrowers are directors of the bank. To prohibit loans to directors or to their affiliated businesses in such a case deprives the bank of its major source of profitable and generally honest business. This problem appears to be restricted to cases where the market for financial services is so small and isolated that self-dealing is practically unavoidable—situations that do not exist for most financial intermediaries. Insurance companies, for example, tend by the nature of their business to seek growth, to do business in a diversity of areas, and to diversify investments in a regional or national market. Similarly, in the case of most mutual funds, it would be ludicrous to suggest that they “need” to invest in securities issued by businesses affiliated with insiders. To be sure, some large, nationally oriented banks customarily have on their boards of directors officers and directors of major borrowing companies. But that custom does not seem to serve any vital function that could not be served in some other way.

In the pension fund area, the parallel question is whether investing heavily in securities or obligations issued by the plan’s sponsor provides significant advantages, not obtainable by a fully diversified fund.

the outstanding cease and desist orders; it began three new proceedings to terminate deposit insurance; it issued a removal order against one bank director; it issued orders suspending three persons from their offices in banks; and it caused 10 other persons to resign or suspend themselves from their positions with insured banks. *Id.* at 14-18. Good information about the number of Justice Department actions taken in response to FDIC referrals of apparent criminal violations does not seem to be available.

231. See, e.g., *Proceedings of ABA National Institute on Fiduciary Responsibilities under the Pension Reform Act: Special Problems of the Securities Industry*, 31 *BUS. LAW.* 269 (1975).

Attempts have been made to justify heavy investment in employer securities in terms of employee capitalism.²³² Under certain conditions the practice is permitted by ERISA.²³³ Yet experience suggests that the abuses facilitated by the practice have outweighed the benefits, except under rigidly controlled conditions.²³⁴

It thus appears that only small, isolated banks and thrift institutions can credibly claim that strict insider misconduct regulation imposes unacceptable indirect costs. Furthermore, the probable demise of anticompetitive regulation and the growth and development of electronic funds transfer systems will weaken these claims by eliminating the competitive isolation in which many of these institutions now operate.

It may be possible to generalize the above analysis of the ERISA rules and the problem of bank loans to directors. Given a large, integrated economy in which both the intermediary and the insiders face numerous parties with whom they might bargain, even a flat prohibition against conflict of interest transactions usually would leave the insiders free to achieve their legitimate goals elsewhere. Costs would only arise to the extent that dealings between the intermediary and its insiders have unique efficiency advantages, such as savings in the cost of formulating and communicating information between potential bargaining entities; but rules that regulate rather than prohibit such dealings may preserve these advantages.

Of course, some conflicts are inevitable and cannot be proscribed. To take the most pervasive example, the persons in de facto control of an intermediary and, within broad limits, its salary payments, will often be salaried officers. Yet, at least historically, regulation of management compensation has tended to rely on flexible general standards, such as the doctrine of waste, rather than on mechanical limits which arguably distort the demand for executive talent and discriminate against the honest but superior executive who deserves above-normal compensation.

Despite the above attempts at generalization about costs, it should be confessed that generalizations across financial intermediaries are hazardous because of the fundamental differences in regulatory patterns. Banking regulators make periodic, on-site, intensive investiga-

232. See, e.g., Note, *Employee Stock Ownership Plans: A Step Toward Democratic Capitalism*, 55 B.U. L. REV. 195 (1975).

233. ERISA §§ 407, 408(c), 29 U.S.C. §§ 1107, 1108(c) (Supp. IV 1974) (investment in employer's securities limited to 10% of plan's assets; exceptions).

234. See J. BROOKS, *supra* note 46, at 15-19; Wall St. J., Aug. 2, 1976, at 2, col. 3 (proposed rules to prevent abuses in employee stock ownership plans).

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tions of the condition of all banks under their jurisdiction.²³⁵ They discourage disclosure of their findings to the general public and even to the public suppliers of capital.²³⁶ The banking regulators also preempt enforcement actions, for insider misconduct in the banking field has generated comparatively little private litigation.²³⁷ The SEC's regulation of investment companies is different in all three respects. It makes no comparable periodic investigations, but merely receives reports and conducts special investigations from time to time.²³⁸ It strenuously urges detailed and extensive disclosure of information to public suppliers of capital.²³⁹ And it encourages private

235. For examples of statutes concerning examination of depository-type financial intermediaries, see 21 U.S.C. § 481 (1970) (Comptroller examines each national bank twice a year, but may waive one examination or cause more frequent examinations); 12 U.S.C. § 483 (1970) (each Federal Reserve Bank may provide for special examinations of member banks in district); *id.* § 1820(b) (FDIC may examine insured bank); CAL. FIN. CODE § 1900 (West Supp. 1976) (superintendent examines banks at least yearly); *id.* § 1911 (West 1969) (examination of national banks); N.Y. BANKING LAW § 36 (McKinney 1971) (superintendent examines commercial and mutual savings banks annually; discretionary extra examinations); CAL. FIN. CODE § 8800 (West Supp. 1976) (biennial examinations of MSBs by commissioner); MASS. ANN. LAWS ch. 167, § 2 (Michie/Law. Co-op 1970 & Supp. 1976) (commissioner examines MSBs at least yearly). For descriptions of the bank examining and supervisory processes of the Comptroller of the Currency and the Board of Governors of the Federal Reserve System, in response to a detailed congressional questionnaire, see I FINE STUDY PAPERS, *supra* note 3, at 349-400, 514-70.

The insurance-type financial intermediaries are also subject, in general, to examinations. *E.g.*, N.Y. INS. LAW § 28-2(a), (b) (McKinney Supp. 1975-76) (examination of casualty insurers at least once every three years; life insurers, five years). *But see* note 238 *infra* (pension plans).

236. For an extraordinary display of regulatory concern for "confidentiality," see [Current] FED. BANKING L. REP. (CCH) ¶ 96,834 (1976) (memorandum of agreement defining scope of GAO study of Federal Reserve System and Chairman Burns's accompanying letter). The GAO study will deal with functions relating to examinations, detection of unsound and unsafe conditions, violations of law and regulations, and remedial processes—all of which could be "material" information to investors in particular banks. *See also* note 239 *infra*.

237. This statement is difficult to support; reported cases are hardly dispositive, since much litigation against corporate insiders is probably settled. My impression is based primarily on observations made while attending practitioner-oriented conferences on banking law and others on investment company law. Fear of private litigation against directors and officers was more evident at the latter. *Compare* J. WHITE, BANKING LAW (1976) (only scattered references to private litigation based on insider conflicts of interest or excessive fees and salaries) *with* R. JENNINGS & H. MARSH, SECURITIES REGULATION 1438-1571 (3d ed. 1972) (discusses insider misconduct largely through opinions in private civil lawsuits). *See also* Knepper, *Officers and Directors: Indemnification and Liability Insurance—An Update*, 30 BUS. LAW. 951, 963, 964 (1975) (mutual funds unable to get insurance for directors and officers, but 1/3 of banks have it).

238. 15 U.S.C. §§ 80a-29, -41 (1970); *cf.* ERISA § 504, 29 U.S.C. § 1134 (Supp. IV 1974) (Secretary of Labor's special investigatory powers; regular examinations not contemplated).

239. 15 U.S.C. §§ 80a-8, -29 (1970). National banks with 500 or more shareholders are subject to Comptroller-promulgated Securities Exchange Act Disclosure Rules, which with certain exceptions are substantially similar to the SEC's regulations. Moreover, the banks must complete reports designed to increase public knowledge of the banks' financial conditions and income. I FINE STUDY PAPERS, *supra* note 3, at 348. (A similar point can be made about member banks and insured nonmember banks. *See* pp. 4-5 *supra*.) It

litigation, of which there has been a great deal, at least in relation to the rather small size of the investment company industry.²⁴⁰ The most recent regulatory statute, ERISA, governs private pension funds. It provides the most complete and most potent set of public and private remedies against breach of its many fiduciary duties.²⁴¹ Reasonably

might be thought, then, that banks are subject to as much required disclosure as are ordinary corporations. There is, however, some arguably material information about a bank that is not disclosed: the regulators' examination reports. *See* 5 U.S.C. § 552(b)(8) (1970) (material prepared by the regulators of financial institutions exempt from disclosure requirements of Freedom of Information Act); *cf.* 18 U.S.C. § 1906 (1970) (criminal penalties for examiners who disclose information about specific borrowers).

The secrecy of examination reports is usually defended by arguing that the ability to conduct 25,000 effective examinations annually is made possible only by the cooperation of the banks and examiners; disclosure could seriously interfere with the "examination process." I FINE STUDY PAPERS, *supra* note 3, at 352. For a full discussion of disclosure policies, see *Financial Disclosure by Banks and Bank Holding Companies: Hearings Before the Senate Comm. on Banking, Housing and Urban Affairs*, 94th Cong., 1st Sess. (1975).

240. *See* note 237 *supra*.

241. Individuals who willfully violate the extensive reporting and disclosure provisions of the Act may be punished by fines up to \$5,000 and imprisoned up to one year. ERISA § 501, 29 U.S.C. § 1131 (Supp. IV 1974). The IRS may impose excise taxes on disqualified persons who engage in prohibited transactions. *Id.* § 3003, 29 U.S.C. § 1203 (Supp. IV 1974). A 5% tax is immediately levied when the transaction is discovered. If, after notice from the IRS, the transaction is not corrected, a 100% tax is imposed. The disqualified person has a duty to correct the transaction. The IRS polices only tax-qualified plans, but civil penalties that are identical to the excise tax provisions are available to deal with persons who engage in prohibited transactions with non-tax-qualified plans. *Id.* § 502(i), 29 U.S.C. § 1132(i) (Supp. IV 1974).

The civil liability provisions are perhaps of greater concern to fiduciaries (a term defined quite broadly). A participant or beneficiary may sue to recover benefits due or to clarify rights to future benefits. The participant, the beneficiary, or the Secretary of Labor may sue to enjoin any action or practice that violates the provisions of the Act. The Secretary of Labor and the Secretary of the Treasury may also intervene in suits brought by participants and beneficiaries, but their right of intervention does not extend to actions for benefits due and clarification. The Secretary of the Treasury may not intervene to enforce fiduciary standards. *Id.* §§ 502(h), 3002(d), 29 U.S.C. §§ 1132(h), 1202(d) (Supp. IV 1974). The fiduciary is personally liable for any losses to the plan resulting from his breach of fiduciary standards and for any profits made through the use of plan assets. He is also subject to such other equitable relief as the court may deem appropriate, including removal. *Id.* § 409(a), 29 U.S.C. § 1109(a) (Supp. IV 1974). Attorney's fees are recoverable. *Id.* § 502(g), 29 U.S.C. § 1132(g) (Supp. IV 1974). All exculpatory provisions that would protect the fiduciary are void. *Id.* § 410(a), 29 U.S.C. § 1110(a) (Supp. IV 1974). The plan may purchase insurance to cover losses incurred by the fiduciary, but the insurance policy must allow an action by the insurance company against the fiduciary. *Id.* § 410(b)(1), 29 U.S.C. § 1110(b)(1) (Supp. IV 1974). The fiduciary may purchase his own insurance. *Id.* § 410(b)(2), 29 U.S.C. § 1110(b)(2) (Supp. IV 1974). Requirements for service and joinder are eased, and places where actions may be brought are expanded. *Id.* § 502(d)(1), (e)(1), 29 U.S.C. § 1132(d)(1), (e)(1) (Supp. IV 1974).

The Secretary of Labor may make investigations at least once a year and more often if he has reasonable cause. *Id.* § 504, 29 U.S.C. § 1134 (Supp. IV 1974). Participants and beneficiaries may not be removed, fined, disciplined, or discriminated against for exercising their rights under the Act. *Id.* § 510, 29 U.S.C. § 1140 (Supp. IV 1974). Use of violence or coercion in this connection is a crime. *Id.* § 511, 29 U.S.C. § 1141 (Supp. IV 1974). ERISA preempts state law except for applicable state insurance, banking, securities, or criminal law. *Id.* § 514, 29 U.S.C. § 1144 (Supp. IV 1974).

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adequate justifications for these differences in the regulation of intermediaries were never presented to any of the legislatures which enacted the various statutes.²⁴²

2. *Benefits*

Regulation of insider misconduct attempts to protect against a major risk—moral or fiducial failure—that is not significantly reduced by anticompetitive regulation or portfolio regulation. Evaluating the success of the strategy is more difficult than defining the type of protection afforded. Unfortunately there has been no extensive empirical research measuring how much insider misconduct is actually deterred. Nor is there any evidence indicating the certainty of achieving protection. Evidence on the role of insider misconduct in the failures of banks, insurance companies, and savings and loans,²⁴³ may suggest that insider misconduct in financial intermediaries is fairly widespread. But the evidence reveals neither how much more misconduct would exist if there were no insider misconduct regulation nor how much less there would be if regulation were greatly intensified. To measure the effectiveness of any species of insider misconduct regulation, one ideally would want to measure the difference in the amount of misconduct occurring with and without the regulation. That type of measurement has not been attempted.

Moreover, there is no established theory, comparable in quality to microeconomic theory in the case of anticompetitive regulation or to portfolio theory and the theory of cash flow models in the case of portfolio regulation, upon which one can build a meaningful *a priori* argument about the effectiveness of insider misconduct regulation. Theories of deterrence in criminology have no clear-cut applications to insider misconduct in the operation of financial intermediaries. Consider, for instance, the view that an insider will be deterred from extracting from his intermediary a secret profit or unfair advantage of the value X , if X is exceeded by S , the negative value of the sanction applied to him if caught and convicted or made civilly liable, multiplied by P , the probability of being caught and convicted or made civilly liable.²⁴⁴ It is extraordinarily difficult to find any meaningful

242. The author is engaged in a project, sponsored by the Law Enforcement Assistance Administration, to study the bases for the choice among regulatory patterns for coping with insider misconduct in the operation of financial intermediaries. In connection with this project, he has reviewed the legislative histories of all the major regulatory patterns. Details of the research will be presented in a forthcoming monograph.

243. See pp. 12-13, 77-78 & nn.46, 48, 219 *supra*.

244. See Becker, *Crime and Punishment: An Economic Approach*, 76 J. POLITICAL ECON. 169 (1968).

value of *P* without having some idea of the prevalence of insider misconduct of the type in question.

3. *Summary*

Insider misconduct regulation produces a special benefit—deterrence of fiducial failure—which the anticompetitive and portfolio strategies do not. The magnitude of the benefit, however, is uncertain. Unlike anticompetitive regulation and, to a lesser extent, portfolio regulation, regulation of insider misconduct appears not to generate significant indirect costs. Its secondary formulation costs also seem to be low. Its direct enforcement costs appear to be higher than those of anticompetitive regulation, though not nearly as high as those of portfolio regulation. On the whole, it is a strategy which should be implemented in some mode because it is not rendered otiose by the implementation of the other two preventive strategies,²⁴⁵ because its side effects are not overly offensive, and because it satisfies a moral sense, not quite reducible to economic considerations, that the law ought to stand against the acts that insider misconduct regulation seeks to control.

D. *Reactive Regulation*

The major way in which government protects public suppliers of capital to financial intermediaries from realized risks of failure is by sponsoring back-up funds (BUFs). Depositors in almost all of the nation's 15,000 commercial banks and 500 mutual savings banks are insured up to \$40,000 by the FDIC, or in similar amounts by a state fund.²⁴⁶ Deposits in most savings and loan associations are insured by the FSLIC.²⁴⁷ Both of these regulatory schemes for coping with the risk of institutional failure began in the 1930s.

245. Whether it is rendered useless by the fourth strategy, reactive regulation, is a somewhat more difficult question. It appears neither politically feasible nor morally acceptable for the legal system to do nothing about insider misconduct. Nevertheless, one can certainly raise questions about the proper degree of involvement of regulators in the enforcement process—for example, whether there should be public examiners who regularly inspect all institutions in order to deter or uncover misconduct. When possible, those questions can be answered in light of the strengths and weaknesses of reactive regulation.

246. 12 U.S.C. §§ 1813(m), 1817(i), 1821(a)(1) (Supp. IV 1974). National banks and other member banks of the Federal Reserve System are necessarily insured. *Id.* § 1814(b) (1970). State nonmember banks may opt for insurance, and most do. As of December 31, 1974, the total number of insured banks was 14,550; noninsured banks numbered 411. Total assets of the former were over \$912 billion, whereas the latter had assets of almost \$15 billion. [1974] FDIC ANN. REP. 186, 211.

247. 12 U.S.C. §§ 1724(b), 1787(c)(1) (Supp. IV 1974) (insurance coverage raised to \$40,000 for FSLIC-insured institutions and for insured credit unions). A large proportion of state-chartered savings and loan associations are insured by the FSLIC. ABA HANDBOOK OF SAVINGS AND LOAN LAW 6 (1973). All federally chartered savings and loan associations are FSLIC-insured. 12 U.S.C. § 1726(a) (1970 & Supp. IV 1974).

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More recently, in the wake of failures of automobile liability insurance companies and the ensuing threat of federal intrusion into the regulation of insurance, 47 states have enacted legislation establishing guaranty funds to protect policyholders against loss in the event of the insolvency of their property and liability insurers.²⁴⁸ Some states even have guaranty funds for life insurance companies.²⁴⁹ Unlike the federal deposit insurance schemes, many of the guaranty companies established by state law are not fully funded but are of the assessment type. They collect premiums from member companies each year as losses occur, rather than collect periodic level premiums which are invested in assets for liquidation as needed to deal with failures.²⁵⁰ Moreover, membership in the state schemes tends to be legally compelled, whereas state nonmember banks are not required to participate in the federal deposit insurance scheme.²⁵¹ Another recent, and extremely important, development was ERISA's establishment in 1974 of the Pension Benefit Guarantee Corporation to provide plan-termination insurance for the participants and beneficiaries of most pension plans covered by the Act; membership is generally compulsory.²⁵²

In short, governmental insurance protection of public suppliers of capital against the financial failures of their intermediaries has become nearly universal, extending well beyond the depository-type intermediaries to most of the insurance-type intermediaries that pose any significant risks of failure. Although the presence of insurance schemes both for depository and for insurance-type intermediaries can be usefully evaluated as isolated phenomena,²⁵³ the similarities are more important than the differences for an understanding of the legal system's response to financial intermediation. Only the investment-type financial intermediaries (the investment companies and the REITs) are untouched by the insurance or guaranty fund concept. To some extent, this may reflect the more elite nature of the suppliers of

248. See Epton & Bixby, *supra* note 46.

249. E.g., N.Y. Ins. Law § 224 (McKinney 1966 & Supp. 1975-76) (creates Life Insurance Guaranty Corp.). Life insurance companies fail at a much lower rate than do property and liability insurance companies. Epton & Bixby, *supra* note 46, at 248.

250. Telephone Interview with Leonard H. Minches, Assistant Special Deputy Superintendent of Insurance, New York Insurance Department (Apr. 9, 1976) (notes on file with *Yale Law Journal*).

251. *Id.*

252. ERISA §§ 4001-4082, 29 U.S.C. §§ 1301-1381 (Supp. IV 1974).

253. See Epton & Bixby, *supra* note 46 (discussion of insurance guaranty funds); Scott & Mayer, *supra* note 76 (discussion of FDIC and FSLIC). However, awareness of insurance funds for most types of intermediaries should preclude some arguments—such as those based on the supposed “special” treatment of bank and S&L deposits—that might otherwise surface in such inquiries.

capital to these intermediaries.²⁵⁴ More importantly, it stems from their intended role as outlets for small investors who are self-consciously willing to take some investment risks. By contrast, those who supply capital to other intermediaries do so, in most cases, to acquire financial services, such as checking accounts or insurance protection; providing funds for an investment is subjectively conceived as incidental to that primary purpose.²⁵⁵

The strategy of reactive regulation also includes responses to liquidity crises as well as to insolvencies. Since only the depository-type financial intermediaries have significant and recurrent liquidity problems,²⁵⁶ this second technique applies only to them. Government-sponsored institutions such as the Federal Reserve Banks, the Federal Home Loan Banks, and other second-order financial institutions²⁵⁷ are designed to act as lenders of last resort to their member institu-

254. This hypothesis is offered as an explanation of the different treatment of investment company shareholders because it makes sense. It is supported somewhat by negative inferences from the Securities Investor Protection Act of 1970, 15 U.S.C. §§ 78o, 78aaa-78lll (1970). The legislative history contains the remark that the "need [for protection of customers of broker-dealer firms] is similar, in many respects, to that which prompted the establishment of the Federal Deposit Insurance Corporation and the Federal Savings and Loan Insurance Corporation." H.R. REP. NO. 91-1613, 91st Cong., 2d Sess. 2 (1970), *reprinted in* [1970] U.S. CODE CONG. & AD. NEWS 5254, 5255. Even so, no one even thought to consider whether the customers should be insured against fluctuations in the value of the securities they purchased through the failed broker-dealer firms. Basically, the Act insures against loss or theft of securities purchased by customers but kept with their broker-dealers. In liquidation proceedings under the Act, customers are entitled to have their "specifically identifiable" property returned to them in kind. 15 U.S.C. § 78fff(c)(2)(C) (1970). Other property held for customers by the failed broker-dealer constitutes a "single and separate fund" in which customers of the failed firm share ratably. *Id.* § 78fff(c)(2)(B). The customer's claim against the fund is computed by reference to the market values of his securities as of the date of initiating the proceedings. *Id.* For a number of reasons the single and separate fund might be insufficient to pay all claims: customers' property might have been misused by the firm or stolen by employees in the preinsolvency confusion, or the aggregate value of the customers' securities might have dropped during the period in which they could not get them back (because of the proceedings). When the fund is insufficient, the Securities Investor Protection Corporation will advance funds to the liquidation trustee to discharge the customer claims, but only to the extent of \$50,000 per customer. *Id.* § 78fff(f). The Act does suggest, however, that similar protections ought to be available to mutual fund shareholders, who are, if anything, less elite than people who invest directly in securities through broker-dealer firms.

255. Again, the chief support for this explanation is only its intellectual coherence.

256. Other financial intermediaries have liquidity needs, of course, but they generally find them less troublesome to manage. *See* STAFF OF THE SUBCOMM. ON DOMESTIC FINANCE OF THE HOUSE COMM. ON BANKING AND CURRENCY, 93d CONG., 1ST SESS., FINANCIAL INSTITUTIONS: REFORM AND THE PUBLIC INTEREST 81-91 (Comm. Print 1973) (discussion of asset and liability maturity ranges of different types of financial intermediaries). Moreover, the assertion in the text is rough and impressionistic; fire and casualty company officials, for example, might object to it on the basis of their troubles in recent years. *See* BUS. WEEK, Sept. 6, 1976, at 46.

257. Second-order intermediaries obtain funds from other financial institutions, and only indirectly from households and nonfinancial corporations. Clark, *supra* note 1, at 1606.

tions. Their role may be instrumental, not only in preventing the failure of individual financial institutions, but also in averting industry-wide crises. Two dramatic examples are the aid given by the Federal Home Loan Banks to thrift institutions during periods of financial disintermediation²⁵⁸ and the promise of the Federal Reserve Board to keep the discount windows open during the crisis in the commercial paper market caused by the Penn Central's insolvency.²⁵⁹

A third major technique of reactive regulation is the provision of special insolvency proceedings for financial intermediaries apart from the ordinary types of federal bankruptcy proceedings. Statutes providing for such proceedings have long governed every kind of commercial bank,²⁶⁰ thrift institution,²⁶¹ and insurance company.²⁶² More recently, special proceedings have been created for pension plans.²⁶³ Investment-type financial intermediaries, again because of their role as vehicles for the self-conscious taking of investment risks, are left to ordinary bankruptcy and reorganization techniques.²⁶⁴

258. The aid may not always be adequate, however. For a variety of views on the Federal Home Loan Bank System's response to the disintermediation in 1966, see Cootner, *supra* note 139, at 315-31; Grebler & Doyel, *Effect of Industry Structure and Government Policies on Housing Demand and Cyclical Stability: Study of 1966 Experience*, in III STUDY OF THE SAVINGS AND LOAN INDUSTRY 1241, 1329-51 (I. Friend ed. 1969); Duesenberry, *Appraisal of Selected Policy Instruments Affecting Savings and Loan Associations*, in IV *id.* at 1591, 1605-13; Friend, *Summary and Recommendations*, in I *id.* at 23.

259. See M. MAYER, THE BANKERS 406-08 (1974).

260. *National Banks*: 12 U.S.C. § 191 (1970) (Comptroller may appoint receiver to close up banking association); *id.* § 197 (after creditors paid off, stockholders vote whether to continue with the receivership or to elect agent to wind up); *id.* § 1821(c) (Comptroller must appoint FDIC as receiver).

State Banks: 12 U.S.C. § 1821(e) (1970) (FDIC must accept appointment as receiver if offered; state law determines proceeding); *id.* § 1821(h) (if found advisable, FDIC organizes new national bank in same community to assume insured deposits of closed insured bank). CAL. FIN. CODE §§ 3101-3132 (West 1968) (superintendent takes possession and liquidates); N.Y. BANKING LAW §§ 606, 618 (McKinney 1971) (same as Cal.).

261. *Mutual Savings Banks*: MASS. ANN. LAWS ch. 168, § 32 (Michie/Law. Co-op 1970) (when assets of savings bank depreciate and fail to exceed deposits plus creditors' claims, bank may, with Commissioner's approval, petition Supreme Judicial Court to have liability to each depositor reduced); N.Y. BANKING LAW § 259 (McKinney 1970) (same as Mass.).

Savings and Loan Associations: 12 U.S.C. § 1729(b) (1970) (FSLIC appoints receiver of federal S&L; receiver may choose to operate S&L, put S&L in sound financial condition, merge S&L with another insured S&L, organize new federal S&L to take over assets, or liquidate); CAL. FIN. CODE §§ 9001, 9011 (West 1968 & Supp. 1976) (commissioner takes possession and may liquidate); *id.* § 9100-9104 (West 1968) (FSLIC as liquidator for insured S&L).

262. For examples of comprehensive statutes relating to life insurance companies as well as fire and casualty insurance companies, see CAL. INS. CODE §§ 1010-1062 (West 1972); N.Y. INS. LAW §§ 510-546 (McKinney 1966).

263. ERISA § 4042(f), 29 U.S.C. § 1342(f) (Supp. IV 1974) (Pension Benefit Guaranty Corporation appoints trustee and operates as if in Chapter X bankruptcy; stay of all other proceedings).

264. The Investment Company Act makes no provision for special insolvency proceedings; the Bankruptcy Act does not exclude investment companies. *But cf.* 15 U.S.C. § 80a-

The costs and benefits of the techniques for responding to liquidity crises and of special insolvency proceedings will be discussed only briefly, after a fuller discussion of BUFs. It should be realized, however, that when a BUF scheme involves special insolvency proceedings, the proceedings should be viewed as an essential part of the BUF's insuring activities. Separate treatment of the latter two techniques is simply a matter of expository convenience.

1. *Costs of BUFs*

The direct enforcement costs of a BUF arise from administering the fund and enforcing compliance with its rules. Those costs seem fairly low in relation to the direct enforcement costs of portfolio and insider misconduct regulation²⁶⁵ and, perhaps, in relation to the expenses of ordinary insurance companies.²⁶⁶

25(c) (1970) (special SEC power to ask district court to enjoin reorganization if plan not fair and equitable); Clark, *Fair and Equitable Reorganizations of Investment Companies*, 53 B.U. L. REV. 1 (1973).

265. The most seasoned of the guaranty funds, the FDIC, may be used for a very rough index. At the end of 1974 there were 233 employees in the Division of Liquidation and 2,054 in the Division of Bank Supervision. [1974] FDIC ANN. REP. 23. The Division of Liquidation is essential to the FDIC's role as a BUF, while most of the work of the Division of Supervision must be allocated to portfolio regulation and insider misconduct regulation. It is not clear how many of the FDIC's 521 other employees (in the Legal Division, Office of the Controller, etc.) should be allocated to each of the four regulatory strategies. As for the absolute magnitude of the FDIC's BUF-related expenses, for the entire period between January 1, 1934 and December 31, 1974, net expenses in deposit assumption and payoff cases totalled only \$9.8 million. *Id.* at 7. Compare this to aggregate administrative and operating expenses of \$592.9 million. *Id.* at 28.

Comparisons of the costs of the different strategies to the regulators do not imply similar relationships of the costs to others such as the regulated firms. In the absence of specific reasons to think otherwise, however, it seems plausible that any such differences would not be so great as to change the orders of magnitude of costs that are indicated by considering the regulators' expenditures.

266. In a discussion of compensation for personal injury, Professor Conard pointed out that the operating costs of the fault system were about 120% of the net benefits received by victims; of private loss insurance systems (principally life and health insurance), about 22%; of some Blue Cross systems, less than 5%; of Social Security programs, about 2%. Conard, *The Economic Treatment of Automobile Injuries*, 63 MICH. L. REV. 279, 290 (1964).

It is difficult to make a comparison with a BUF such as the FDIC without some reasonable definition of "net benefits" received by its beneficiaries. If a bank fails, the amount of deposits paid by the FDIC (in a deposit payoff case) or the amount of loans and assets purchased (in a deposit assumption case) undoubtedly overstates the loss that would have occurred to depositors absent the FDIC's back-up activities, because the value of the failed bank's assets is typically close to the total deposit claims against the bank. In other words, banks are usually closed before they become grossly insolvent. Accordingly, a reasonable index of net benefits to depositors may be the FDIC's net insurance losses. By the latter I mean the principal disbursements in deposit assumption and payoff cases (\$1.2 billion between 1934 and 1974) less recoveries through subrogation, liquidation of purchased assets, and the like (\$990 million over the same period), which leaves approximately \$210 million for the 1934-74 period. [1974] FDIC ANN. REP. 7. Dividing the \$9.8 million of expenses mentioned in note 265 *supra* by \$210 million gives an expense-

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As is true of most of the other regulatory techniques, the primary formulation costs of BUFs are sunk costs. Secondary formulation costs of BUF systems are currently trivial, though they could reach a moderately significant level if, as is sometimes suggested,²⁶⁷ the BUFs were to charge premiums that vary as closely as possible with differences in the riskiness of each insured institution. With variable premiums, the funds would have to engage in or pay for data collection and rate-establishing activities similar to those of private insurers and rating boards. They would presumably use only those classifications that could be shown by empirical evidence to have a bearing on the insured institutions' probabilities of failure. As the earlier discussion of balance-sheet shaping rules suggested,²⁶⁸ only a rather crude system of classifications would now be justified; nevertheless, with more research the funds could identify better criteria.

As for the first subtype of indirect costs, BUFs need not, and commonly do not, serve unsound ulterior ends. A minor exception may be a situation in which a funded plan is required to invest in the securities of the governmental unit that established the plan. This may provide a small captive market for these securities. Such a market could decrease slightly the interest paid by the governmental unit and constitute a tax on the institutions insured under the plan.²⁶⁹

All this is preface. The heart of the matter is whether BUFs impose substantial indirect costs by interfering with a reasonably well-functioning market system of allocating resources or by unfairly discriminating among types of capital suppliers. More than the preventive strategies, a BUF operates rather immediately, directly, and efficaciously to constrain the choices that public suppliers of capital might make. Interference with free choice in the market may cause a misallocation of resources. One is therefore inevitably brought back to a consideration of the reasons for any risk regulation of financial intermediaries.

Suppose the public suppliers have information adequate to assess the financial soundness of the intermediaries with which they might deal, as well as information about other relevant aspects of the services provided—for example, the meaning and coverage of insur-

to-net insurance losses ratio of about 4.7%. The figure will be somewhat different if certain unallocated insurance expenses and miscellaneous disbursements are included. Nevertheless, the ratio seems to be within the Blue Cross expense range as determined by Conard, which is a low range. All of this depends, of course, on viewing the FDIC's supervisory activities as independent of its insurance function.

267. Scott & Mayer, *supra* note 76, at 886-95.

268. See pp. 67-76 *supra*.

269. Scott & Mayer, *supra* note 76, at 897.

ance policies, their comparative prices, and the like. They are able to balance institutional safety against other financial product attributes. They know their own preferences, which the legal system will not second-guess. The institutions are not already so regulated that a BUF would countervail the misallocations caused by any existing regulation.

Under these circumstances, an institutional failure would constitute a healthy market discipline on both public suppliers of capital and their intermediaries—*i.e.*, on the owners of the residual earnings of the intermediaries. Everyone who “took” the risk should bear the costs of the realized risks. A legislatively imposed BUF would shift the cost of risk taking away from the public suppliers of capital who would voluntarily take greater risks, thus giving them more safety than they want and would bargain for. And it would be difficult for them to escape the excess safety completely, because many services of financial intermediaries—for example, payment services or home fire insurance protection—are not principally investments and have no close substitutes. Over time, the allocatively correct amount of risk taking would not occur. To be sure, shareholders of the insured institutions will still bear the risks they took, because they are not covered by BUFs and because the BUFs are subrogated to the rights of public suppliers of capital in insolvency proceedings.²⁷⁰ Indeed, this fact, and the fact that variations in income short of those causing default are not insured against by BUFs, supply the basic reasons why it makes no sense to argue that if the government is going to insure insurance companies, it might as well simply dispense with private insurers. Similarly, whoever is entitled to the residual earnings of a mutual institution will be unprotected by the BUF from the consequences of institutional failure. But these qualifications do not negate the fact that the insured institutions can no longer offer the public supplier

270. 12 U.S.C. § 1821(g) (1970) (subrogation rights of FDIC); *id.* §§ 1728(b), 1729(b) (FSLIC pays insurance when account “surrendered and transferred” to it; such surrender and transfer causes subrogation); *Lanigan v. Apollo Sav.*, 52 Ill. 2d 342, 288 N.E.2d 445 (1972) (FSLIC’s subrogation rights in liquidation of state-chartered, FSLIC-insured savings association); *Mass. Ann. Laws ch. 168 app.*, § 17(d) (Michie/Law. Co-op 1970) (subrogation rights of Deposit Insurance Fund for member savings banks established in Massachusetts); *N.Y. Ins. Law* § 224(5) (McKinney 1966) (power of Life Insurance Guaranty Corporation to “receive, own and administer” assets acquired in connection with assumption, reinsurance, and guaranty operations); *id.* §§ 333(7), 334(1) (McKinney 1966 & Supp. 1974-75) (subrogation rights of property and liability insurance security fund). Compare ERISA’s more elaborate technique of making plan-sponsoring employers liable to reimburse the Pension Benefit Guaranty Corporation for insurance benefits paid to plan participants upon termination of the plan. The liability is for 100% of the employer’s underfunding of the plan, though it cannot exceed 30% of the employer’s net worth and may become secured by a lien. ERISA §§ 4062, 4068, 29 U.S.C. §§ 1362, 1368 (Supp. IV 1974). Some employers are exempted from such liability.

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of capital financial intermediary services with a variety of risk-return characteristics.

a. *BUFs v. The Free Market*

In assessing the relevance of this sort of criticism, one may first contrast a regulatory regime using only a BUF technique with a free market system (neither system is a live option, of course), and then, more realistically, consider the BUF in relation to the other strategies. One major problem with premising an argument on the hypothetical market for financial services is that, in fact, public suppliers of capital appear to face severe information costs in assessing the riskiness of financial services. Regulatory machinery to supply the relevant information to public suppliers of capital would be costly; machinery to provide the information quickly enough to be useful would be even more expensive and institutionally difficult.²⁷¹ One suspects that most ordinary people, even if supplied regularly and quickly with financial statements, would be unable to assess properly the risk of financial failure of the intermediaries without a great deal of effort. Nor, of course, could they predict the risk of managerial self-dealing very well. In short, individual public suppliers of capital do not appear to be particularly good evaluators of the risk of failure.

If this assessment is correct, then two related propositions can be made. First, a BUF need cause only an insignificant loss in terms of the policing of institutional risk-taking by public suppliers of capital. Most of them did no policing to start with, since risk of institutional failure did not figure in the evaluation of financial services and their prices. Policing that might have occurred could even be preserved in a rough way. If, for example, it is thought that large depositors of commercial banks, or large business purchasers of insurance, are generally sophisticated enough to evaluate a company's soundness and can do so reasonably cheaply, then the BUF can be designed so as to exclude them from coverage (as well as from the inadvertent, unpaid-for salvation that is sometimes available in special insolvency proceedings).²⁷²

The second proposition is that a BUF may be more clearly desirable

271. Cf. Benston, *The Effectiveness and Effects of the SEC's Accounting Disclosure Requirements*, in *ECONOMIC POLICY AND THE REGULATION OF CORPORATE SECURITIES* 26 (H. Manne ed. 1969) (arguing that SEC-required information is irrelevant and untimely).

272. Some regulators believe that the FDIC's use of merger and sale techniques has kept most large, technically uninsured depositors from suffering loss in bank failures. Interview with C.F. Muckenfuss III, Special Assistant to the Director, FDIC, in New Haven, Conn. (Apr. 19, 1976) (notes on file with *Yale Law Journal*).

if designed so that those who are better risk-evaluators than the public suppliers of capital evaluate the riskiness of financial intermediaries and either restrict or pool the risk. Among the entities that might more cheaply evaluate the riskiness of a financial intermediary are regulatory agencies, other members of the industry, and private insurance firms. Each has its own problems, of course, though imposing the task on any of them appears better than leaving it on the public suppliers of capital. Regulators, with prodding from conservative members of the industry, can discern risky practices and can either directly restrict them as unsound practices or, if legally permitted, cause higher insurance premiums to be charged the riskier institutions. They can do this without the high cost of communicating to and educating the public suppliers of capital. Their institutional mandate and political pressures may, however, lead regulators to act as if there can never be too much safety.²⁷³ Alternative sources for risk evaluation are other members of the industry. But it can be dangerous to allow institutions of a given type to judge each other's riskiness. The process may be corrupted by the dominant, better-established institutions, who might consider innovations in risk taking to be unsound practices.

A system that required each institution to obtain insurance against its own financial failure through any of a number of approved private insurers would have several advantages. The system would be economically feasible, despite the doubts of some that the private insurance markets could not cope with the burden.²⁷⁴ Competition

273. Even if the regulator believed that one cheap strategy of risk-reducing regulation gave virtually absolute protection to public suppliers of capital, he would suffer little except cognitive dissonance by continuing to enforce redundant strategies. Moreover, it is not implausible that the regulator would actually benefit from redundancy. His agency is not always competing against other suppliers of regulatory services, and even when it is, the regulated firms may choose one agency over another on the basis of which imposes lower costs on them (*i.e.*, their elite capital suppliers), without regard to the relative benefits produced by each agency for public suppliers of capital. Redundant regulation may also produce more jobs for regulatory personnel—perhaps a major, if unexpressed, goal of bureaucratic political organizations. Finally, the redundancy may create an impression among the unsuspecting public that the regulators are really doing a good job for them, a situation that will produce more respect and status for the regulators.

274. See Scott & Mayer, *supra* note 76, at 866-80 (insurance of banks and S&Ls imposes almost open-ended potential obligation on insurer; only institution with open-ended money-creating power, such as federal government, able to assume burden). Nevertheless, Scott and Mayer contend that the deposit insurance funds of the FDIC and the FSLIC—in 1969 about \$4.1 billion and \$2.8 billion respectively—are unnecessarily large. *Id.* at 878-86. It certainly seems within the capacity of private insurance funds to amass reserves of this size. Private non-life insurance companies in the United States already have, as a group, more than \$68 billion in financial assets. Clark, *supra* note 1, at 1606 n.7. Sixteen of the 50 largest diversified financial companies (a fair number of which have non-life insurers within their corporate families) have assets in excess of \$2.8 billion. The largest, Aetna Life and Casualty, has over \$15 billion in assets, and its casualty subsidiary is a

among the private insurers could restrain them from exacting premiums for super safety and would encourage them to find the best feasible subcategorization of risk classes. As opposed to social insurance systems, this private system, if well-functioning, would give the insurer of the financial intermediaries an economic incentive to find the optimal mix between risk prevention and risk pooling, and to sell that mix to the insured institutions.²⁷⁵ Despite these advantages, however, a system of private back-up insurers would lack the symbolic and psychological advantages of a governmental fund. An ultimate back-up commitment by a governmental unit might be thought necessary because of the possibility of a double failure of the insured financial intermediary and its insuring company. Moreover, if regulators were to approve the private insurers, the regulators' biases about proper risk levels might not be avoided.

One principal fear about the BUF applies equally to a governmental or private system and could be resolved equally well by either of them. If the prospects of failures among a type of financial intermediary are so uncertain as not to be susceptible to actuarial treatment, insurers pushed or drawn into the business of insuring such risks may overcharge substantially, as they apparently do in wildly uncertain areas like directors' and officers' liability insurance. To mitigate this possibility, the law establishing the BUF could call for an assessment plan rather than a funded plan. The governmental or private insurer, though having funds or an emergency line of credit adequate to meet liquidity needs, would collect premiums each period reflecting the actual losses and costs incurred in the previous period plus, in the case of the private insurers, a preannounced markup. The normal disadvantage of the assessment plan of insurance, that volatile rather than level premiums bear too harshly on many insureds, would hardly be a problem where the insureds are financial intermediaries rather than individuals, and are paying premiums that are quite small in relation to their total volume of business.

The argument thus far has been that introduction of a BUF into an

major part of it. The 50 largest together have total assets exceeding \$143 billion. *FORTUNE*, July 1976, at 208. Even quite small insurers might participate in private back-up insurance by means of reinsurance agreements. Furthermore, the possibility of "open-ended" liability is really not so awesome: a slight probability of a truly enormous wave of failures does not mean that a back-up insurer, whether private or public, ought to have an infinite fund or charge infinite premiums. And if macroeconomic disaster and a consequent decimation of financial intermediaries should occur, nothing prevents the government from trying to help.

275. Besides affecting the risks that insureds take by presenting risk-related premium classifications to them, insurers in many lines are greatly concerned with loss prevention and minimization. See, e.g., S. HUEBNER, K. BLACK & R. CLINE, *supra* note 21, at 506-19.

unregulated market for consumer financial services will probably not lead to a greater misallocation of resources, since there are substantial market imperfections already. A properly designed system might even improve allocation by putting the choice of risk-taking levels upon entities that can better evaluate the risks of institutional failure. Possible distributional effects are subsumed in the discussion of benefits, where it is assumed that spreading the losses that would otherwise fall on the public suppliers of capital of a particular failed intermediary is a desirable program.

One other argument, phrased in terms of equity rather than allocation, concerns the public supplier of capital who (1) is a good evaluator of risk and (2) desires to take higher than normal risks for a modest increase in benefits or returns, or a decrease in the price of a financial service. By giving him an absolutely safe deposit, savings account, fire insurance policy, retirement plan, or the like, even though he would knowingly and intelligently choose a less safe product, the system is treating him unfairly.

A conservative response to this argument—*i.e.*, a response shying away from paternalistic assertions—is not that the rights of the rational riskophile may be trampled for no reason, but that such persons are thought to be rare among the public suppliers of capital dealing with financial intermediaries. Most public capital suppliers are probably not good evaluators of risks;²⁷⁶ even if given the simple option of checking a box to indicate whether they wanted account insurance, they would not have or understand the information necessary to make the choice properly. Most of the individuals dealing for their personal account with insurance-type financial intermediaries are looking mainly for protection from risks; one suspects that very few would welcome the chance to save a few pennies that meant that a governmental BUF would no longer cover them. Nor is there any reason to believe that checking account depositors and holders of savings deposits are searching for a chance to take greater risks but are foiled by the overprotective legal system. Rather, those capital suppliers who have some discretionary assets and desire to risk them for a chance of higher returns have many options open to them, from investing in mutual funds to betting on the horses.

b. *BUFs v. The Other Strategies*

If BUFs are the second best choice because a free market would be imperfect, are they second best in relation to the other strategies? One

276. See pp. 15-21 *supra*.

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argument sometimes made in the banking context is that the FDIC protects small-to-moderate depositors fully, and large depositors are either virtually protected²⁷⁷ or can take care of themselves. Therefore, it is argued, the other safety-oriented strategies must be directed at something other than the protection of depositors.²⁷⁸ The task is thus thought to be discovery of that hidden agenda. More generally, since the BUFs protect virtually all public suppliers of capital, except those involved with investment-type financial intermediaries, the other three strategies of risk regulation must not be directed at protection of public suppliers of capital. As expressed, this argument is an anachronism. Anticompetitive regulation, portfolio regulation, and insider misconduct regulation of an especially strict sort were all in full sway before the BUFs were established.²⁷⁹ It is much more likely that BUFs were enacted as the cheapest strategy for taking protection of public suppliers of capital closer to the ultimate level.

The likely historical scenario may be sketched. At a given time there are only preventive strategies which achieve a certain level of protection. It is desired to raise the level of protection so that the total represents almost absolute safety. It is correctly perceived that the last layer of protection would be enormously expensive to achieve by strengthening the preventive strategies. For example, draconian port-

277. See note 272 *supra*.

278. Some have argued that the purpose of capital adequacy rules is to restrict the growth of banks. See, e.g., Golembe, *supra* note 180.

279. The point is true of the property and liability insurance area, since most of the insolvency guaranty funds were established within the last few years. It is also true in the life insurance area, where fewer states have adopted guaranty funds, though portfolio regulation and insider misconduct regulation are intense. As for commercial banks, it might be observed that the FDIC was created by § 8 of the Banking Act of 1933, ch. 89, 48 Stat. 162 (codified at 12 U.S.C. § 1811 (1970)), long after the framework of federal bank regulation had been created by the National Bank Act, ch. 106, 13 Stat. 99 (1864), and the Federal Reserve Act, ch. 6, 38 Stat. 251 (1913).

The chronology of the federal statutes concerning savings and loan associations is mildly indicative. The Federal Home Loan Bank System, with its handle on the liquidity policies and other financial aspects of member associations, was created by the Federal Home Loan Bank Act, ch. 522, 47 Stat. 725 (1932) (codified at 12 U.S.C. § 1437 (1970)). Afterwards came federal chartering and the potential for federal regulation of insider misconduct. Home Owners' Loan Act of 1933, ch. 64, 48 Stat. 128. Finally, the FSLIC was created by Title IV of the National Housing Act, ch. 847, 48 Stat. 1246 (1934) (codified at 12 U.S.C. § 1725 (1970)). Much more significant is that all of the federal laws came into a context of well-established state-chartered savings and loan associations, which had long been heavily regulated (but not insured) by state agencies in the detailed manner in which banks were regulated.

Pension plans comprise a more complicated case. ERISA created a plan termination insurance system at the same time that it mandated adequate funding (portfolio regulation) and draconian insider misconduct rules. The investment options and standards of conduct of pension plan trustees, however, had long been regulated by state trust law; and pension plans managed by insurance companies were the beneficiaries (or victims, perhaps) of state law's intense regulation of life and annuity insurers.

folio restraints might be necessary to eliminate the last bits of portfolio risk, and a colossal enforcement effort would have to be mounted to eliminate all failure-causing insider misconduct. By contrast, a BUF could clearly add the final layer of protection at a fairly low cost.

Of course, private firms and insurance companies make this sort of judgment—the decision to resort to pooling rather than preventing risks—all the time. A manufacturing company subject to strict products liability for harm caused by defects in its products, for example, may spend money on improvements in design and assembly procedures that make the product safer. But at some point the company will judge it cheaper to deal with the residual risk by obtaining insurance or self-insuring.

Once the BUF system has been put into operation, however, it will eventually occur to regulators and commentators that the preventive strategies might be dispensed with, in whole or in significant part, without sacrificing the ability to obtain the higher level of protection and without a substantial increase in the cost of the BUF. To be sure, relying entirely on the BUF would lead to more failures and a need for higher premiums. The latter would make the misallocative potentialities of a simple premium system appear much greater and, in an effort to mitigate this kind of cost, the BUF might be converted to a variable premium system, which would entail its own special costs. But if the judgment can be made that these additional costs are less than the old total cost of implementing the preventive strategies, then it follows that the decision to abandon the preventive strategies is a wise one.

If the general considerations and hypotheses put forward here about the four strategies are accepted, the legal system could probably achieve the optimal mix of strategies for the depository and insurance-type financial intermediaries by substantially cutting back on the use of the three preventive strategies, especially those employing anticompetitive regulation and portfolio regulation.

2. *Benefits of BUFs*

One striking characteristic of reactive regulation in general, and the BUF in particular, is that it easily deals with risk in a comprehensive way. A BUF does something for the public suppliers of capital regardless of the cause of failure. In this sense it is more complete in the type of protection it gives than any of the other strategies. Moreover, given the limits of human imagination, preventive strategies are likely to omit regulation of some unforeseen routes to failure. If one may

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use the long-tested FDIC and FSLIC as reliable indicators, a BUF will provide a rather high level of protection to public suppliers of capital and will provide it in a predictable and nonvolatile way.²⁸⁰ Bank capital adequacy ratios have often failed to prevent bank failures. The FDIC has never failed to meet the valid claims of insured depositors.²⁸¹ Thus, in terms of the scope, level, and certainty of benefits they provide, BUFs are clearly superior to the other three strategies of risk regulation.

3. *Special Insolvency Proceedings and Quasi-Governmental Liquidity Schemes*

The theory behind special insolvency proceedings for financial intermediaries appears not to have received careful and sustained attention.²⁸² A BUF's interest in minimizing its losses might be thought to justify putting its agents in charge of the proceeding, as is often done.²⁸³ It is simply too inefficient always to meet the insurance obligation by direct payments to public suppliers of capital. Other techniques, such as arranging an acquisition of the failed institution by a strong one, may reduce losses but require the BUF to be in control of the situation. Moreover, there is a felt need for ensuring that

280. In the past five years, payment of insured deposits has usually begun within five to seven days following the closure of the bank, regardless of its size. . . .

....

... While I have indicated my belief that FDIC has adequate financial resources to handle even within a single year bank failures several times the combined magnitude of United States National Bank, Franklin National Bank and American Bank & Trust, a massive breakdown of our entire banking system, which I do not believe is even remotely possible, could be a different story.

Address by FDIC Chairman Wille to the 18th Bank Presidents' and Senior Officers' Policy Seminar of the Western Independent Bankers in San Francisco, Cal. (Mar. 11, 1975).

281. By contrast, the FDIC disbursed only \$1.337 billion between January 1, 1934 and year-end 1974 to pay depositors up to the insured limit, Furthermore, the 3,300,000 depositors in those banks who were helped by FDIC protection have suffered a loss, on average, of less than 1/2 of 1 percent of that deposit total—borne *entirely* by depositors with more than the FDIC-insured amount on deposit on the day of failure, most of whom are corporations, institutions or public bodies.

Id. (emphasis added).

282. There are occasional discussions in published sources. An early memorandum submitted to a Senate subcommittee by the then Chairman of the FDIC gave a number of reasons for having the FDIC act as receiver of failed banks. The FDIC's tremendous investment in closed insured banks was thought to require that it have the right to supervise liquidation of the assets; an analogy to the principle of creditor control in bankruptcy (via election of the trustee) was drawn. It was also argued that selection of the FDIC would reduce liquidation expenses, both because of its incentive to minimize its losses and because a large portion of the work preliminary to actual liquidation would be done by the FDIC whether or not it acted as receiver. *Banking Act of 1935: Hearings on S. 1715 Before a Subcomm. of the Senate Comm. on Banking and Currency, 74th Cong., 1st Sess., pt. 1, at 186-87 (1935).*

283. For example, the FDIC is always the receiver for failed national banks. See note 260 *supra*.

conservators, receivers, and liquidators with a special expertise in esoteric financial matters will be appointed. And certainly it will facilitate either reorganization or liquidation if regulators, who are familiar with the institution's assets, liabilities, and problems during the final days, are put in charge of the post mortem and the disposition of the estate. The procedures may also reflect an appreciation of the need for speed in reorganization or liquidation of a financial intermediary, so that situations like a failure of confidence on the part of public suppliers or a failure to continue premium payments will not force numerous liquidation sales at distress prices. Another possibility is that official regulators of financial intermediaries, or persons appointed by them as conservators or receivers, will be better able to discover the insider misconduct that contributed to the failure. Regardless of whether special insolvency proceedings always produce positive benefits that ordinary federal bankruptcy proceedings do not, it is definitely probable that they are less costly and less cumbersome.

Quasi-governmental sources of liquidity pose considerations that are similar to those suggested by the BUFs. Depository-type financial intermediaries can be told by regulators how to manage their liquidity needs so as to avoid a liquidity crisis, with varying degrees of specificity and at varying costs. But at some point it becomes more efficient to cope with residual risks by pooling rather than by increasing the cost of preventing a liquidity crisis at each individual institution. From one perspective the Federal Reserve Banks and the Federal Home Loan Banks are a pooled source of liquidity for institutions. Even more than the insurance funds, however, these banks, in their role as lenders of last resort, serve functions other than protection of public suppliers of capital. Liquidity crises can be quite widespread. The Federal Reserve Banks stand ready to prevent perturbations in the money supply, which could multiply in their impact and have serious and widespread macroeconomic consequences. The Federal Home Loan Banks can also be seen as serving a similar function, if a more expansive view of monetary aggregates is taken.²⁸⁴ The latter also help to maintain a flow of funds to the housing sector during tight money periods. Neither of these goals should be regarded as an undesirable ulterior end.

4. *Summary*

Reactive regulation, as exemplified in the BUFs, surpasses the other strategies in the scope, level, and certainty of the protection of public suppliers of capital that it provides. Furthermore, it generates only

284. See note 77 *supra*.

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low or moderate enforcement and secondary formulation costs. Upon analysis, its possible misallocative effects and unfair treatment of some persons appear not to be serious. Probably an ideal mix of strategies would be approached by *substantially* curtailing anticompetitive and portfolio regulation, and dealing with the resulting increases in failures through reactive regulation.

Conclusion

Perhaps only my conclusion about portfolio regulation is really surprising. Abolition of anticompetitive regulation, though a displeasing prospect to certain interests affected by regulation, is certainly not a recommendation foreign to study commissions and academic commentators.²⁸⁵ In view of the role of insider abuses in some of the more spectacular failures of financial intermediaries, continued pursuit of insider misconduct regulation seems desirable. Increased emphasis on reactive regulation is also consistent with elements of received learning, which generally treats deposit insurance as one of the happier regulatory ventures launched during the Depression. Suggesting a substantial reduction in the energy channeled into portfolio regulation may, however, sound a discordant note in view of occasional reports in the media about sophisticated early warning and surveillance systems.²⁸⁶ Much of this article has been aimed at justifying a rather negative assessment of that strategy.

Exactly how lawmakers and regulators should withdraw from the addictive charms of portfolio regulation is a difficult question. The most obvious focus of change is the examination process. Of course, this study has not explored whether periodic examinations of financial intermediaries might be justified on a cost-benefit basis when all of the goals of these examinations, including those not pertaining to soundness, are taken into account. But assuming that we can satisfy ourselves as to a negative outcome in that reckoning—as I suspect we could—then radical changes are called for. The number of bank and insurance company examiners could be greatly reduced. Regular examinations of all regulated intermediaries could be replaced by a system of special investigations of some intermediaries upon the happening of specific triggering events or suspicions. Such investigations as do occur would

285. See, e.g., REPORT OF THE PRESIDENT'S COMMISSION ON FINANCIAL STRUCTURE AND REGULATION (1971).

286. The Comptroller of the Currency's national bank surveillance system (which is now in operation) has recently received favorable mention as the "most advanced" of the systems for spotting bank problems. *Ailing banks are hard to spot*, BUS. WEEK, Nov. 8, 1976, at 108. Note, however, the theme of the article as reflected in its title.

focus on detection of suspected problems and on the adequacy of the institution's system of internal control and monitoring, rather than on a routine review of asset quality and compliance with financial ratios. A second line of attack would be to broaden the powers of all financial intermediaries with respect to permissible investments, liabilities, and balance-sheet characteristics. Even the experiment of permitting banks, thrift institutions, and insurance companies to invest in any kinds of financial assets in any proportions should be seriously considered.²⁸⁷ At the same time, substantially greater resources should be devoted to empirical research on the application of portfolio theory to financial intermediaries and to the discovery of financial attributes that predict failures and can be manipulated effectively without the generation of substantial indirect costs and enforcement costs.

This inquiry has been principally an attempt to produce extremely rough generalizations about the costs and benefits of the four strategies of risk regulation. It has only occasionally dealt with the question of the distribution of costs, which would warrant a major effort in its own right. Soundness is a good. It is not free. To the extent that regulation produces it, someone pays. As a rough first guess, anticompetitive regulation seems to impose costs principally on customers of intermediaries and their public suppliers of capital. Portfolio regulation seems to impose its costs, at least initially, on elite suppliers of capital—the stockholders of financial intermediaries. Insider misconduct regulation burdens both bad and good insiders—directors, officers, and controlling shareholders—who often comprise a subset of elite suppliers of capital. Reactive regulation imposes costs on intermediaries as entities. Who the ultimate cost bearers are may be a question as elusive and arguable as the much-debated problem of the incidence of the corporate income tax, but one suspects that the costs are substantially passed on to public suppliers of capital.

Nevertheless, it is not unrealistic to believe that, within limits, implementations of any of the four strategies could be designed so as to have costs fall where it is thought that they ought to fall. In any event, if the cost of soundness ought to be spread among the protected class, the public suppliers of capital—as I think they should—then it should not be difficult to modify reactive regulation so as to achieve more certainly that result. That done, giving the palm to the fourth strategy will honor equity as it serves efficiency.

287. To the extent that freeing up asset restraints impairs the attainment of goals other than soundness, such as subsidizing home purchases, corrective adjustments in other laws may have to be made. For example, bigger tax breaks for home buyers might be enacted.